

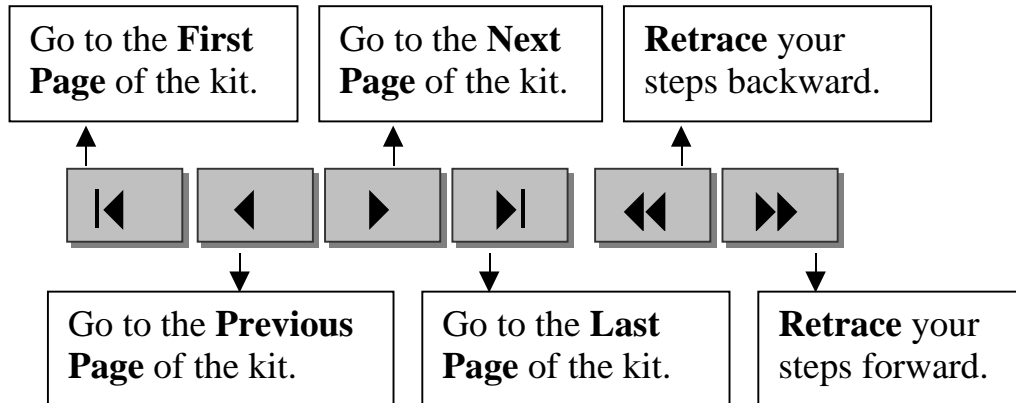
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# Fitness & Nutrition

<b>Exercise Basics</b>	<b>Getting &amp; Keeping Fit</b>
<b>Nutrition Basics</b>	<b>Cooking &amp; Eating Right</b>

# Exercise Basics

## Getting & Keeping Fit

## Nutrition Basics

## Cooking & Eating Right

<b>Fitness Essentials</b>	<b>Pay Attention to Your Heart Rate</b>
<b>Warning: Being Out of Shape Is Hazardous to Your Health</b>	<b>Taking Your Pulse</b>
<b>Developing a Personal Fitness Plan</b>	<b>Choosing the Right Exercise Shoes</b>
<b>Setting Fitness Goals</b>	<b>Fit at Any Age</b>
<b>Aerobic Metabolism: Energy With Oxygen</b>	<b>Tips for Exercising Safely</b>
<b>Anaerobic Metabolism: When You Need Instant Energy</b>	<b>Are You Overtraining?</b>
<b>How Energy Works: Activity, Fatigue and Recovery</b>	<b>RICEing Fitness Injuries</b>
<b>Exercise and Your Heart</b>	<b>Replacing Fluids Lost From Exercise</b>
<b>Exercise and Weight Control</b>	<b>Sport Drinks</b>
<b>Strength-Training Is Important, Too</b>	<b>Your Target Heart Range (poster)</b>
<b>Stretching for Flexibility</b>	<b>The FIT Formula (poster)</b>
<b>Fitting Fitness Into a Busy Schedule</b>	<b>First Aid for Sports Injuries: RICE! (poster)</b>
<b>Eating Before Exercise</b>	<b>The Components of Total Fitness (poster)</b>
<b>Why Warm Up? Why Cool Down?</b>	<b>Exercise Shoes (poster)</b>

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# Fitness Essentials

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**W**hen most people think about fitness, the first question they usually ask is, "Where do I start?" Exercise can sometimes appear difficult, awkward and time-consuming. A helpful approach is to look at the three essential parts of fitness:

- **cardiovascular health**, which refers to the condition of a person's heart and blood vessels after aerobic conditioning;
- **flexibility**, which is gained by increasing the range of motion of the joints and muscles in the body;
- **strength**, which comes from training the muscles over time.

The most successful exercise programs combine all three of these fitness essentials.

## Aerobics and Your Heart

Exercises that strengthen the heart are called "aerobic" exercises. This kind of exercise increases the heart's power and efficiency and improves the body's use of oxygen. Typical aerobic exercises include:

- **brisk walking,**
- **running,**
- **swimming,**
- **bicycling.**

All these aerobic exercises should be performed for 20 to 30 minutes at a pace that is brisk but does not make you short of breath.

## Stretching Is Important Too

The most effective way to increase the body's flexibility is to do regular stretching exercises. This kind of exercise can improve the body's range of motion within a relatively short time. It feels good too. Remember to stretch slowly, without bouncing, holding each stretch for at least 10 seconds.

## Building Your Strength

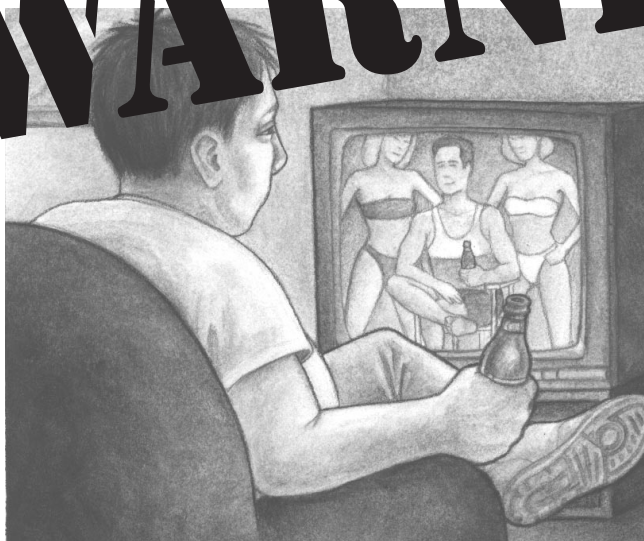
Muscle strength can be improved by forcing the muscles to work against increasing amounts of resistance. The most common methods of building muscle strength are lifting weights and using specially designed resistance machines. Be sure to warm up before doing any strengthening exercises. Work up to three sets of 10 repetitions each, resting between sets.

## The Fitness Program

The key to fitness is to begin slowly and work gradually toward greater flexibility, strength and endurance. Try to schedule exercise at least three times a week for about 20 to 30 minutes each time and include a mix of the three fitness essentials. Also remember to warm up for a few minutes before exercising and to cool down for a few minutes at the end of each workout. If you experience pain or severe fatigue after exercising, contact a physician. And if you have an existing medical condition or a family history of heart disease, get expert advice on developing a safe exercise program first. Take the first step toward a fitter, healthier body by incorporating these essentials into your life.



# WARNING:



## Being Out of Shape Is Hazardous To Your Health

Though modern medicine has triumphed over many of the infectious diseases and traumas that killed our ancestors, new health problems have taken their place. Often, the so-called degenerative diseases—the diseases of old age in our culture—can be mitigated, delayed or even prevented by changes in the way we live our daily lives.

### What Is Poor Fitness?

Poor fitness could be defined as not being up to the demands of daily living. The unfit person may suffer from:

- a lack of energy and vitality;
- addictions to alcohol, drugs, cigarettes or food;
- excess body weight, which puts additional stress on many body systems;
- a lack of physical strength;
- vulnerability to physical illness;
- vulnerability to mental or emotional illness;
- structural problems, including inflexibility, stiffness or joint pain;
- an inability to relax and enjoy life.

When all of these factors are combined, people who are unfit seem less resilient, less able to deal with the daily stresses and challenges of life. They are also more likely to become sick or to become incapacitated by their illnesses. They can be crippled by such conditions as diabetes, arthritis or heart disease and often die at an early age. Even such seemingly unrelated factors as income level and family harmony may be adversely affected by a low level of fitness.

### Putting the Brakes on Bad Habits

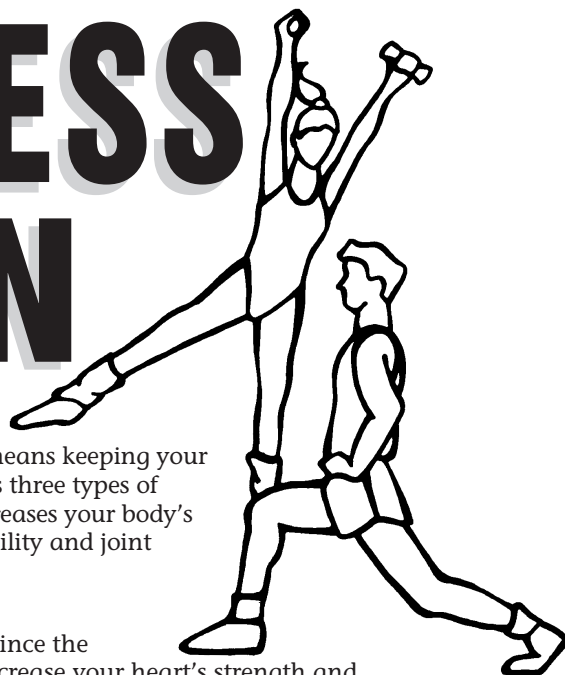
The first step in reversing the downward spiral of poor fitness is to identify health habits that need changing, such as poor diet, smoking, drinking alcohol to excess or not exercising. Dietitians and other health educators are good sources of information and can help you set your own priorities for change. Finally, begin replacing the bad habits—one by one—with good ones.



## DEVELOPING A PERSONAL

- ▶ **Aerobics**
- ▶ *HEALTH*
- ▶ **Flexibility**
- ▶ *Resistance Exercise*
- ▶ **STRENGTH**
- ▶ *Stretching*

# FITNESS PLAN



**FITNESS.** It's a much-confused term. To some, it means being trim or muscular. But total fitness is more than that—it means keeping your body in top working order. A total physical fitness plan includes three types of exercise—aerobic (which exercises large muscle groups and increases your body's ability to use oxygen), stretching (which improves muscle flexibility and joint mobility) and resistance (which increases muscle strength).

### **Aerobics—The Core of Your Program**

Your heart pumps oxygen-rich blood to the rest of your body. Since the heart itself is a muscle, aerobic exercises maintain and even increase your heart's strength and endurance. When done correctly, such exercises help your heart reach and maintain a target heart range (THR) for 20 to 30 minutes. Your THR is the safest and most effective range of heartbeats per minute during exercise. (The chart shows approximate THRs for various ages.) Activities such as swimming, walking, jogging, stair-climbing and cross-country skiing are aerobic.

### **Stretching for Flexibility**

Stiff, weak muscles can limit movement, increase your risk of injury, fail to support the rest of your body and make it hard to maintain a vigorous activity long enough to reach your THR. Stretching exercises improve muscle flexibility and joint mobility when the stretch is comfortably held for 10 to 20 seconds without bouncing.

### **Resistance Exercise for Strength**

Muscles not only support all the bones in your body, they make even routine physical activities possible, not to mention sudden or strenuous ones. Strengthening muscles strengthens joints and reduces the risk of osteoporosis. Push-ups, pull-ups and weight lifting are resistance exercises that strengthen muscles.

### **A Healthy Lifestyle— Rounding Out Your Plan**

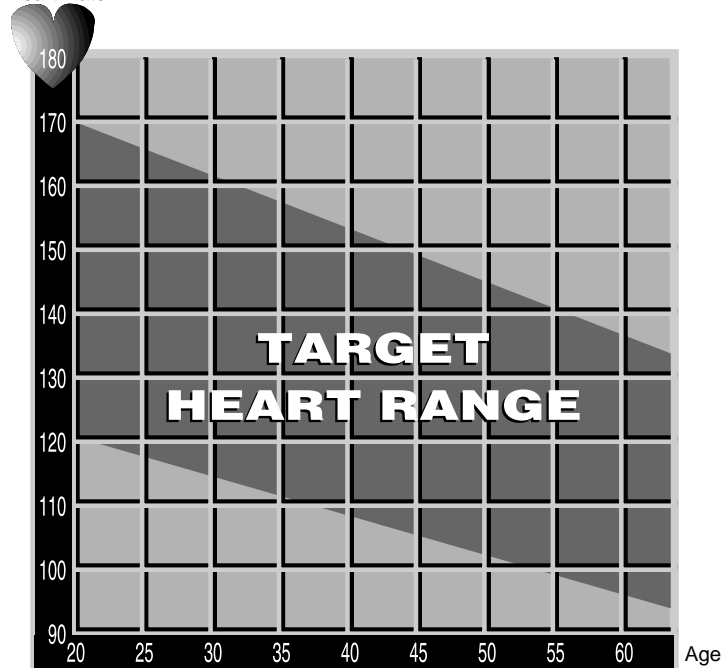
Fitness also includes weight control, proper nutrition and stress reduction. Becoming fit is saying "yes" to a fuller life and "no" to unhealthy habits, such as smoking, alcohol and drug misuse. A total fitness plan can increase both the number and the quality of the years ahead of you.

### **Starting Your Plan**

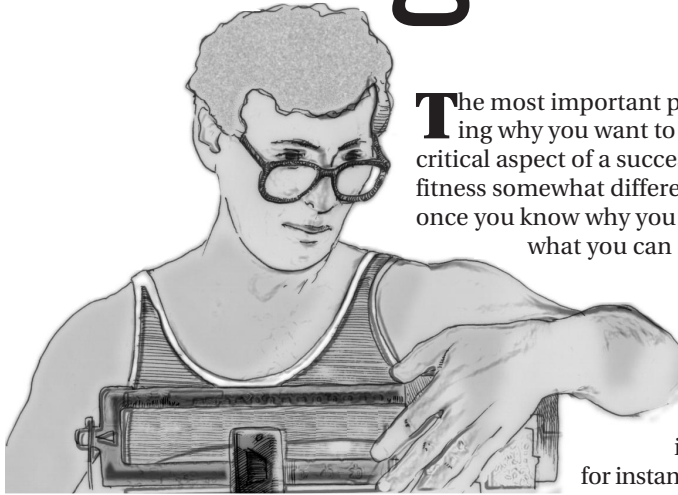
As you begin your fitness plan, pace yourself. Learn your correct THR and try not to exceed it. Choose activities you enjoy as your core aerobic exercises and do a variety of conditioning exercises to improve flexibility and muscle strength. Finally, make healthy lifestyle choices to help yourself become healthy and fit.

*Aim for the low range of your THR when you first begin your fitness plan. Gradually work up to the higher range as you become more physically fit. However, if you're a smoker, suffer from a chronic medical condition or have a personal or family history of heart disease, check with your health-care professional before starting any exercise program.*

Heart Rate



# Setting Fitness Goals



**T**he most important part of developing a personal plan for physical fitness is knowing why you want to become more fit. As simple as that may sound, it is actually a critical aspect of a successful fitness plan. If your goal is weight loss, you'll approach fitness somewhat differently than if your goal is building strength and endurance. And once you know why you want to become more fit, you can more easily determine what you can do to reach that goal.

## Setting Long-Range Goals

Be specific. Sit down with paper and pencil and jot down exactly what you hope to accomplish by becoming more physically fit. If your goal is to lose weight, how much? If you want to improve your endurance, how will that help you? If you wish to improve specific skills (your bicycling, swimming or golf game, for instance), state them. Knowing what you want in the long run will help you tailor your program to achieve your ends and provide motivation.

**Writing down  
well-planned  
working goals  
can help you  
achieve what  
may seem to be  
an “impossible  
dream.”**

## Setting Working Goals

If your long-range goal is to lose 15 pounds, start by setting short-range “working” goals—small steps that will help you reach your long-range wish. Working goals specify what, how much, when and how often you will do an activity that helps you move toward your final goal. For instance, a working goal might be to attend a one-hour exercise class after work on Mondays, Wednesdays and Fridays. Each time you attend a class, you've met one working goal. If your ultimate goal is to increase the amount of weight that you can bench-press, your working goals will center around progressively “overloading” your muscles until you can build up to the desired weight.

## Keeping a Planner

The best way to outline working goals—and to make your fitness plan a firm commitment—is to keep a planner. Write down the activities you will do, which days you will do them on, and when and how long you will do them. It's best to space similar workouts at least 24 hours apart to allow for adequate recovery time. If you exercise using high-impact aerobics on Monday, wait until Wednesday to repeat that activity. On Tuesday, you might engage in strength training, flexibility exercises or a low-impact workout, such as swimming or bicycling.

For optimum results, exercise vigorously three to five times a week. When you've accomplished each goal, take a minute to write a comment or two on how you felt afterward. Did you feel a sense of accomplishment? Have you noticed that you're exercising with greater ease than when you first started? Did eating lunch before your workout affect your performance? Keep notes about your progress and use this information both to analyze any problems you may be having and to award your achievement.

## The Payoff

Long-range goals can be easy to lose sight of. That's why working goals and planners are important. By writing down what you hope to accomplish and setting well-planned working goals, you'll find that the payoff isn't the “impossible dream,” it's the final, inevitable, successful result of a series of hard-earned achievements.

# ● Aerobic Metabolism: Energy With Oxygen

**W**e've all heard the word "aerobic," and most of us think of it as a form of exercise. In fact, aerobic describes a type of metabolism, the process by which your body breaks down or "burns" stored fuel to create energy. Your body can create energy in one of two ways: aerobically (with direct oxygen) or anaerobically (without direct oxygen). For short bursts of energy, as in weight lifting, your body uses the anaerobic process, but for continuous activity, as in steady jogging, it uses the aerobic process.

## Energy and Aerobics

Our bodies draw energy from the food we eat (which is stored in the body as fat and in the muscles as glycogen). The bloodstream carries oxygen to cells throughout the body, where it transforms the stored fat into energy. You can think of food as "fuel" and oxygen as the "match" that releases that energy. The more energy you demand, the more oxygen you will need to release it. The process of using oxygenated blood to directly release energy is called aerobic metabolism.

## Improving Oxygen Supply

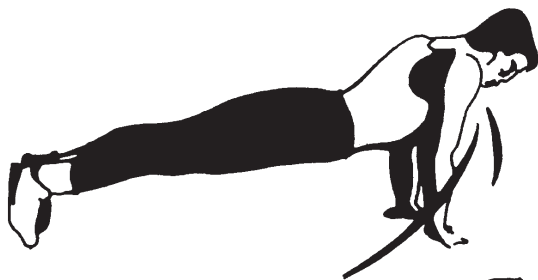
Improving the body's ability to process and deliver oxygen can improve stamina not only in sports but in any activity. To do this, you need to strengthen and condition your heart—the muscle that pumps oxygen-rich blood to the rest of your body. Like any muscle, the heart can grow stronger and more efficient by progressive "training," in which demand (in this case, oxygen demand) is gradually increased. The normal unconditioned heart pumps approximately 70 times a minute or about 100,000 beats a day. The well-conditioned heart conserves energy. It can supply oxygen-rich blood to the body with only about half the usual effort, or 58,000 beats a day.

## Aerobic Exercise

Aerobic exercise progressively places increased demands on the heart, causing it to grow stronger and more efficient. These activities involve a steady, continuous motion of the large muscle groups and place a large and continuous energy demand on the heart. Aerobic activities—walking, running, swimming, bicycling, dancing, etc.—should be intensive enough to raise and sustain your heartbeat to its target heart range (THR) for 20 to 30 minutes. A target heart range is defined as 60 percent to 85 percent of maximum capacity. To calculate your THR, subtract your age from 220 and multiply your answer by .6 and by .85. The two figures represent your safest range of heartbeats per minute during exercise. For optimum benefits, exercise within your THR for at least 20 minutes at least three times a week.

## Aerobic Energy

To get the competitive edge in sports and to improve overall stamina and endurance, aerobic fitness is crucial. Combined with anaerobic muscle conditioning and stretching exercises, aerobics is a key part of any total fitness plan. The more oxygen you can process, the more energy you can put out. When you think of aerobics, think energy.



# Anaerobic Metabolism: When You Need Instant Energy

**A**naerobic metabolism is one of the ways in which your body transforms “fuel” from the food you eat into energy. Anaerobic means “without oxygen.” This is because it supplies oxygen to the muscles *indirectly*, through stored carbohydrates, rather than directly, or aerobically, through the lungs.

Anaerobic metabolism fuels short bursts of activity, such as in weight lifting or sudden sprinting, when your body requires energy faster than the cardiovascular system can provide to it aerobically. Carbohydrates (in the form of sugars called glucose and glycogen) store oxygen for immediate energy production in the body. On the other hand, when energy demands are gradual and longer-term, the body’s aerobic metabolism handles the slower, steadier and direct form of oxygen supply to the muscles.

## The Anaerobic Threshold

Once your body switches from the short-term anaerobic metabolism to the longer-term aerobic metabolism, moderate levels of activity can be sustained by aerobic metabolism alone. However, if a sudden burst of energy is required (such as the last sprint at the end of a race), your body is again forced to produce the extra energy anaerobically. This metabolism switch is called the anaerobic threshold. Unfortunately, one of the by-products of anaerobic metabolism is lactic acid, a harmful waste product that causes muscle pain and fatigue. The body requires additional oxygen to break down lactic acid, which is why you may gasp for air when you pass the anaerobic threshold. In a sense, you’re repaying your “oxygen debt.”

## Improving Endurance

The body’s stores of glucose and glycogen also fuel muscular endurance. One way to improve endurance is to increase the body’s supply of carbohydrates.

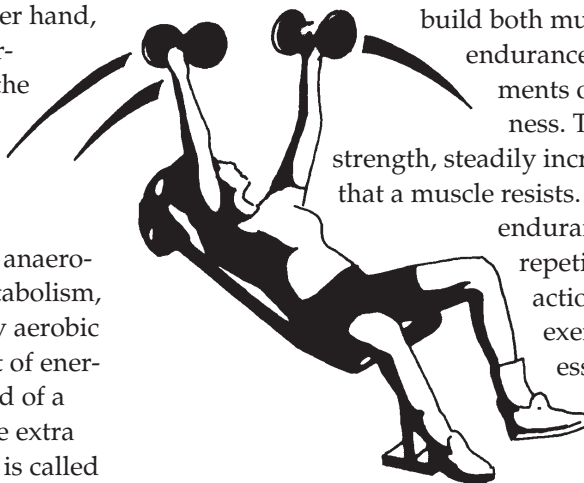
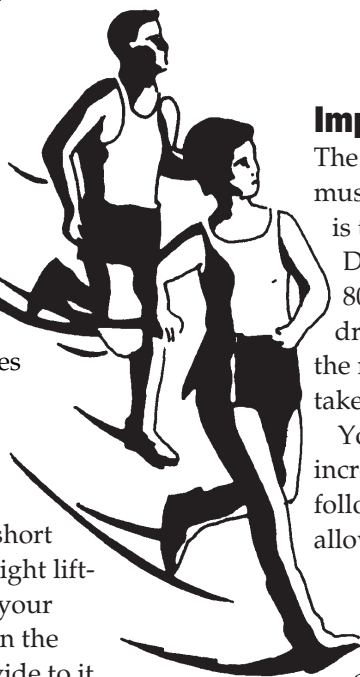
Dietitians recommend a diet that gets 60 percent to 80 percent of daily calories from complex carbohydrates. Such a diet may increase energy reserves in the muscles, prolonging the time before muscle fatigue takes place.

You can also improve endurance by gradually increasing the repetitions of a given movement and by following each set of repetitions by a rest period. This allows the body to eliminate excess lactic acid.

## Anaerobic Exercises

Activities that require more energy than the cardiovascular system can provide—weight lifting, sudden sprinting, resistance exercises—are considered anaerobic. Anaerobic exercises can

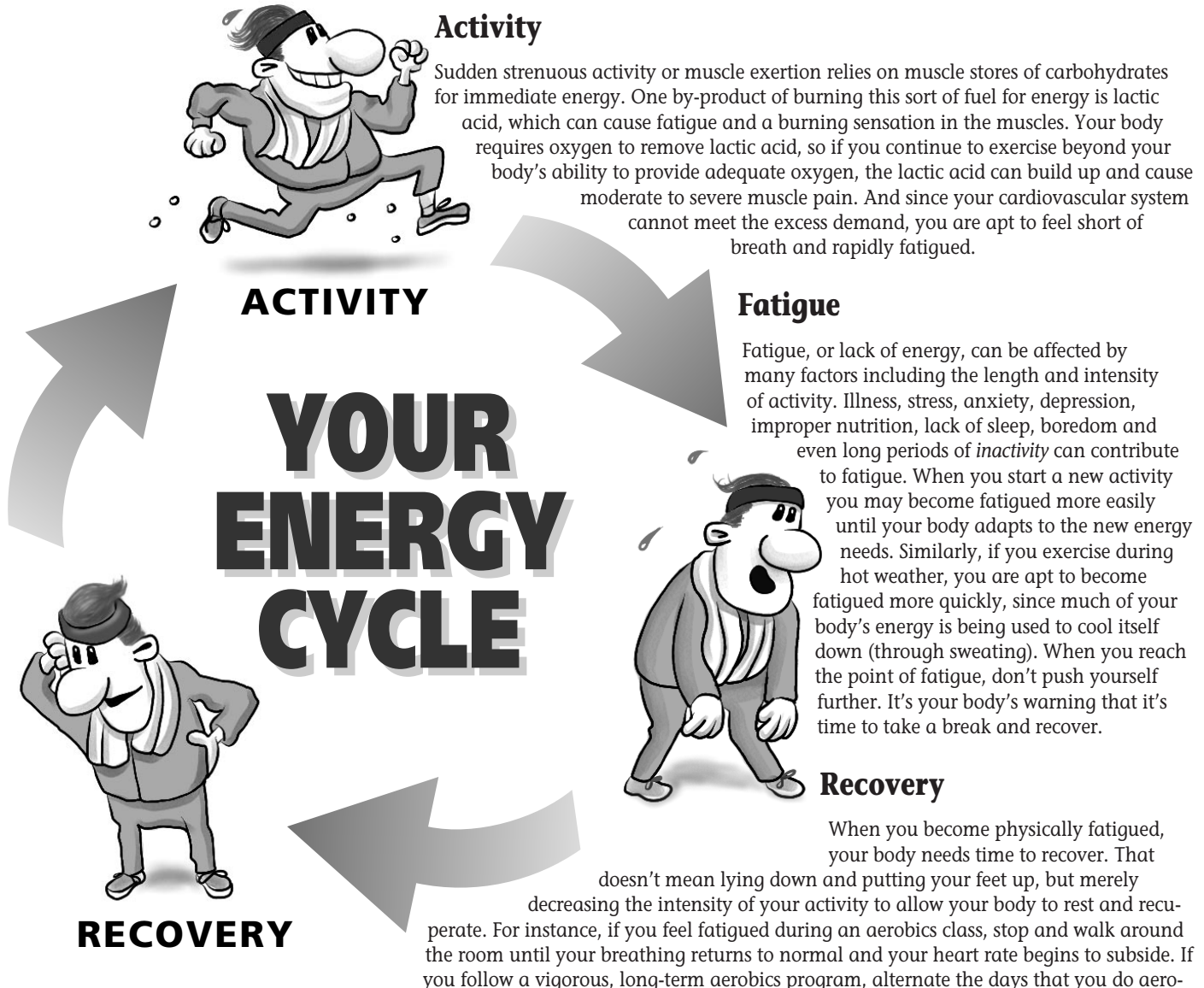
build both muscle strength and endurance, two key elements of muscular fitness. To build muscle strength, steadily increase the weight that a muscle resists. To build endurance, increase the repetitions of an action. Anaerobic exercises are thus an essential part of any total fitness plan.



# How Energy Works

## Activity, Fatigue and Recovery

Have you ever wondered why the exercises you do to improve your level of fitness and build energy often leave you feeling fatigued and sometimes sore? You might say that a total picture of energy actually involves a cycle of activity, fatigue and recovery. Each of these is an important consideration when planning your fitness program.



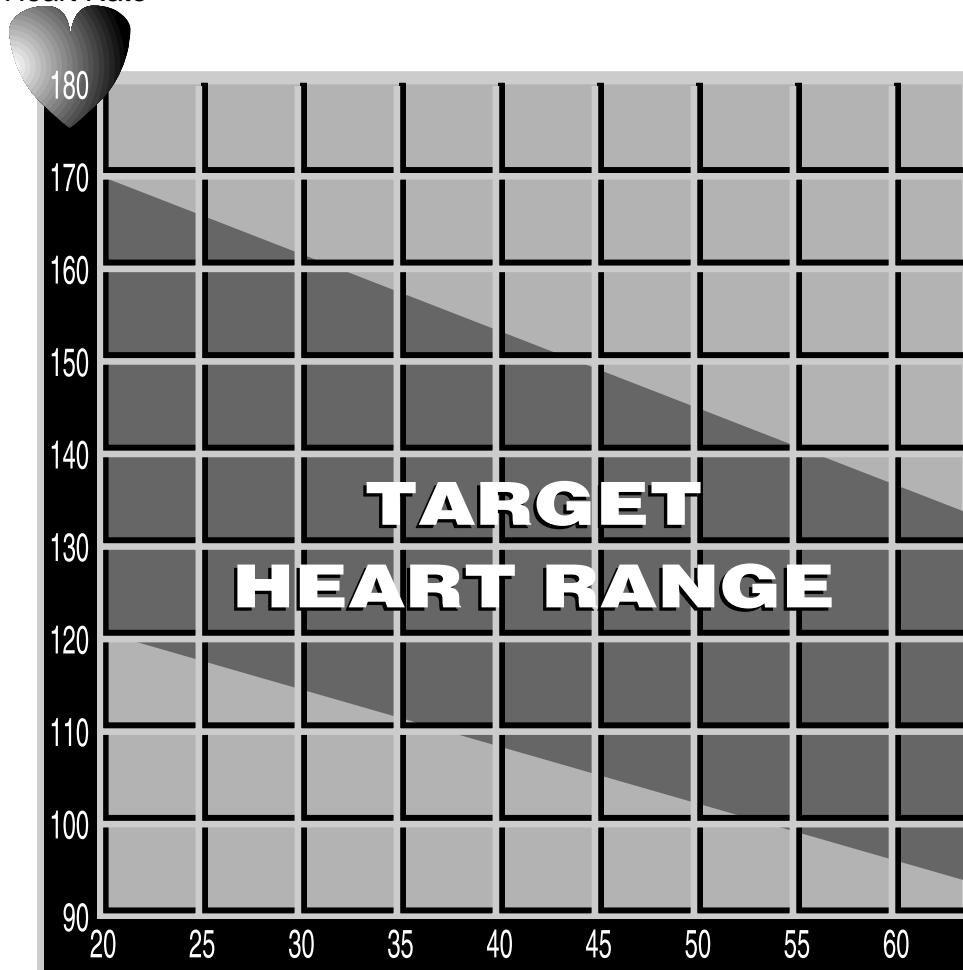
bics with other types of activities, such as strengthening and flexibility exercises. For example, you might do aerobics on Monday, calisthenics on Tuesday, aerobics on Wednesday and so forth. Building adequate recovery time into your fitness plan can actually result in quicker gains and less risk of injury.

## Your Energy Cycle

Understanding the cycle of activity, fatigue and recovery is an important aspect of your total fitness plan. It takes your body anywhere from 24 to 48 hours to recover from an "all-out" workout, and it is during this recovery period that the physiological changes that improve your level of fitness occur. Working out too hard, too soon can actually harm your progress. Don't shortchange your fitness goals by pushing too hard. Remember, recovery from fatigue is as important to fitness as activity or exercise itself.

# Exercise and Your Heart

Heart Rate



Fitness is a combination of muscular strength, muscle flexibility and cardiovascular fitness. Of these components, cardiovascular fitness is perhaps the most important, because it reflects the body's ability to release energy. Improving your cardiovascular fitness increases your supply of oxygen and your energy and can lead to prolonged endurance and optimum performance. By conditioning your cardiovascular system, you can also decrease your risk of heart disease, stroke, high blood pressure and other life-threatening diseases.

*Aim for the low range of your THR when you first begin your fitness plan. Gradually work up to the higher range as you become more physically fit. However, if you are a smoker, suffer from a chronic medical condition or have a personal or family history of heart disease, check with your healthcare professional before starting any exercise program.*

Age

## The Conditioned Heart

The normal unconditioned heart beats at a rate of approximately 70 beats per minute at rest, or about 100,000 beats a day. The well-conditioned heart can actually beat as few as 40 times a minute at rest, or approximately 58,000 beats a day. In short, a well-conditioned heart conserves energy. It can supply oxygen-rich blood to the rest of the body with half the effort of an unconditioned heart.

## Aerobics for Heart Health

Since the heart is a muscle, it can become bigger and stronger through exercises that progressively increase the body's demand for oxygen. This type of exercise is called "aerobic," which means "with oxygen." Aerobic exercise involves steady, continuous motion of the large muscles, which places a large and continuous demand on the heart.

Aerobic activities—walking, running, swimming, cycling, aerobic dance, etc.—should be intensive enough to raise and sustain your heartbeat to a target heart range, or THR (60–85 percent of its maximum capacity), for 20 to 30 minutes. (See chart.) For optimum benefits, exercise aerobically within your THR for at least 20 minutes at least three times a week.

## The End Result

A well-conditioned heart, like any muscle, is stronger and more efficient than average. By exercising within your target heart range for 20 to 30 minutes three to four times a week, you can condition your heart, enjoy the benefits of a fit and healthy lifestyle and reduce your risk of life-threatening diseases.



# Exercise and Weight Control

**A**lmost everyone has tried to lose weight at one time or another. People who have had the greatest success know that a person has to do two things to lose weight:

- ✓ **Eat fewer calories than the body needs.**
- ✓ **Increase the number of calories the body burns as fuel.**

## **“Burning Up” Calories With Exercise**

Regular exercise is the best way to get the body burning more calories than are consumed as food. That’s because during prolonged strenuous activity, the body requires a great deal of fuel, and it naturally turns to the biggest energy supply it has: stored body fat. The more exercise a person does, the more body fat is, in a sense, “burned up” to create energy.

Some kinds of exercise use up more calories than others. Aerobic exercise is the quickest “fat-burner” and has the additional advantage of strengthening the heart. Popular aerobic activities include walking, running, aerobic dancing, swimming and bicycling. Thus, to achieve weight loss, exercise aerobically for at least 30 minutes, at least three times a week.

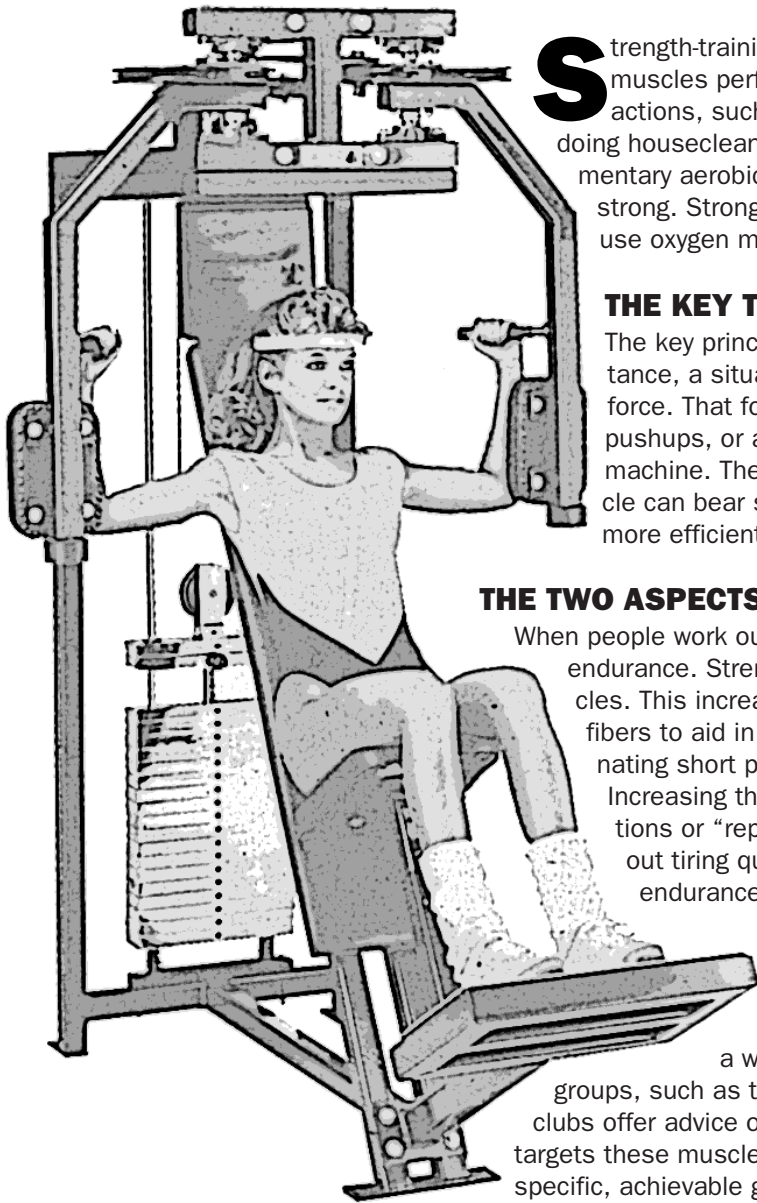
## **Insuring Weight Loss Through Nutrition**

Weight loss is not a matter of exercise alone. Eating the right foods can help the body lose weight at a healthy, moderate pace and also makes it more likely that the weight loss will be maintained over a long period of time. Proper nutrition helps a person lose the craving for high-fat, high-calorie foods and stimulates the desire for healthy, balanced low-fat meals.

Losing weight through proper nutrition and an exercise program can produce a slimmer, healthier body that is more likely to remain trim and fit over the long term. To maintain good health, also make sure you get all the vitamins, minerals, fiber and other nutrients your body needs.

## **The Successful Weight-Loss Formula**

If you’d like to lose weight and you’re over 40, if you have an existing medical condition or special dietary needs, or if you experience unusual fatigue or other medical problems while on a weight-loss program, consult your physician or a registered dietitian. With a program of exercise, nutrition and professional guidance you’re bound to succeed in losing weight—and in keeping it off.



**S**trength-training is more than just building gorgeous muscles. Fit muscles perform better all day long, even performing mundane actions, such as moving files, restocking the supply room or doing housecleaning. Physical conditioning also enhances complementary aerobics programs by keeping muscles flexible and strong. Strong, efficient muscles support our bodies better and use oxygen more effectively, placing less strain on our hearts.

### **THE KEY TO MUSCULAR STRENGTH**

The key principle in developing muscular performance is resistance, a situation in which muscles work against a resisting force. That force may be a person's own body, as with pushups, or an external force, such as a barbell or a weight machine. The idea is to progressively increase the load a muscle can bear so that it can grow larger and stronger and work more efficiently.

### **THE TWO ASPECTS OF MUSCULAR HEALTH**

When people work out with weights, they can build both strength and endurance. Strength is built by progressively overloading the muscles. This increasing of the resisting weight recruits more muscle fibers to aid in the movement. Endurance is developed by alternating short periods of exertion with periods of rest or recovery. Increasing the number of times a weight is lifted, called repetitions or "reps," builds a muscle's ability to expend energy without tiring quickly. Many muscles that support posture are endurance-type muscles.

### **A STRENGTH-TRAINING PROGRAM**

Most people who pursue strength training seriously do so at least twice and usually three times a week. They concentrate on particular muscle groups, such as the abdominals, upper body or legs. Most health clubs offer advice on how to get the most out of the equipment that targets these muscle groups. If you plan to work out at home, aim for specific, achievable goals and likewise concentrate on your particular

muscle groups. If you have a pre-existing condition that may be affected by resistance exercises, such as high blood pressure or low back pain, ask your

physician about a strength training program that's suited to you. You'll look, feel and perform better and enjoy long-term benefits as well.

# **Strength Training Is Important Too**

# Stretching for Flexibility

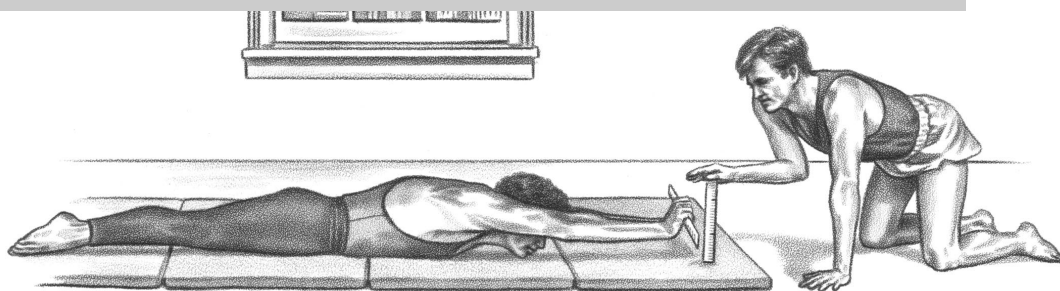
Muscular performance—strength and endurance—is only half of total muscular fitness. The other half is flexibility. Flexibility is the ability of a body segment to move freely over a wide range of motion without stiffness or resistance. Flexible muscles are less prone to soreness and injury and can help improve overall muscular performance since they're longer and less likely to "tear" or strain than tight, inflexible ones.

## Static Stretching

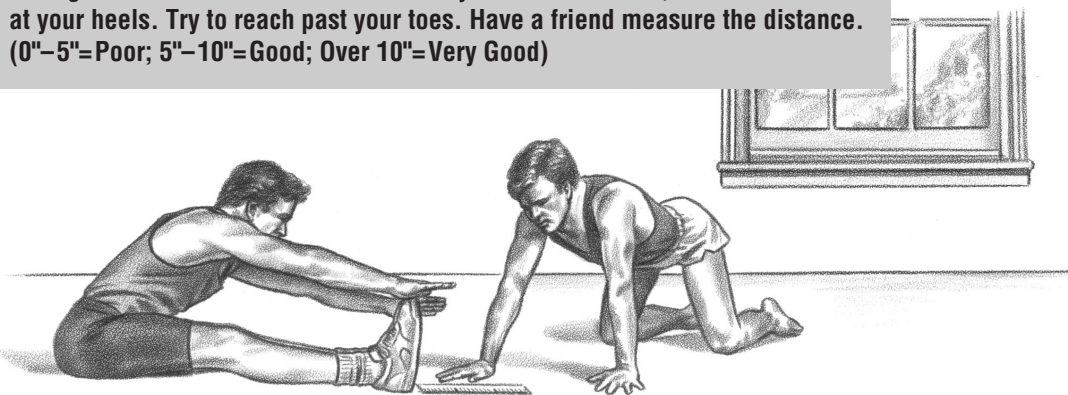
Gentle static stretching exercises are perhaps the best means of keeping your muscles and joints flexible. Stretching for five to 10 minutes before vigorous activity can help reduce your risk of injury. And stretching for an equal amount of time after rigorous activity can prevent muscle soreness. A consistent stretching program will improve your overall level of flexibility.

The best way to stretch a muscle is to do it slowly and gently. When you reach your maximum pain-free stretch, don't bounce. Just hold the stretch until your muscle relaxes, usually 10 to 20 seconds. Because of this holding period, these types of stretches are called "static" stretches. Static stretches safely elongate your muscles as well as the tendons that attach them to the bone, thereby improving joint mobility.

**Arm and Shoulder Stretch:** Lie face down on the floor, holding a yardstick above your head, with your hands a shoulder-width apart, palms down. Keeping your chin on the floor, slowly lift the yardstick off the floor and have a friend measure the distance from the floor. (0"–5"=Poor; 5"–10"=Good; Over 10"=Very Good)



**Sitting Toe Touch:** Place a ruler between your feet as shown, with the 5" mark at your heels. Try to reach past your toes. Have a friend measure the distance. (0"–5"=Poor; 5"–10"=Good; Over 10"=Very Good)



## Joint Mobility

Joint mobility is improved by flexible muscles, but there are also specific exercises that can work your joints through their entire range of motion without necessarily stretching surrounding muscles. These exercises or movements generally use a back-and-forth or circular motion to improve joint mobility. They should always be done slowly with controlled motion to avoid pushing a joint past its limits, since jerking or bouncing can cause injury to the joint.

## Measuring Flexibility

How do you know if you need to improve your flexibility? Here are two simple tests. The Sitting Toe-Touch checks the flexibility of the low back and the backs of your legs. The Arm and Shoulder Stretch measures the flexibility of your shoulders and upper back. Lack of flexibility in these muscle groups usually indicates a need for overall improvement. When doing these "tests" don't jerk, bounce or force yourself to move further than is comfortable. To be safe, use slow, gentle movements when trying these tests.

*Making Time for Fitness*

# Fitting Fitness Into a Busy Schedule

**Y**ou know that becoming physically fit can enhance the quality—and number—of the years ahead. But you can't seem to find enough time to make fitness work for you. Making time for fitness means setting priorities, sneaking extra activities into daily routines and scheduling fitness time as you would other important events.

## **MAKING FITNESS A PRIORITY**

Ask an expectant parent about the preferred gender of their baby-to-be. The typical answer? "It doesn't matter, as long as the baby is healthy." Health is the most precious quality we can wish for a newcomer into the world, and deciding to stay fit and healthy is our way of protecting that gift. You can become more fit by exercising just 20 to 30 minutes, three times a week. Isn't it worth your time to make fitness a priority in your life?

## **ACTIVATING YOUR DAILY ROUTINE**

Five minutes of extra movement here and there can add up to a more active lifestyle. To activate your daily routine, try some of these tips: take the stairs when possible (or walk a few flights and then take the elevator), park your car at the far end of the parking lot, hand-deliver messages at work rather than picking up the phone, and so on. With a little creativity, you'll find dozens of ways to increase the amount of movement in your daily routine.

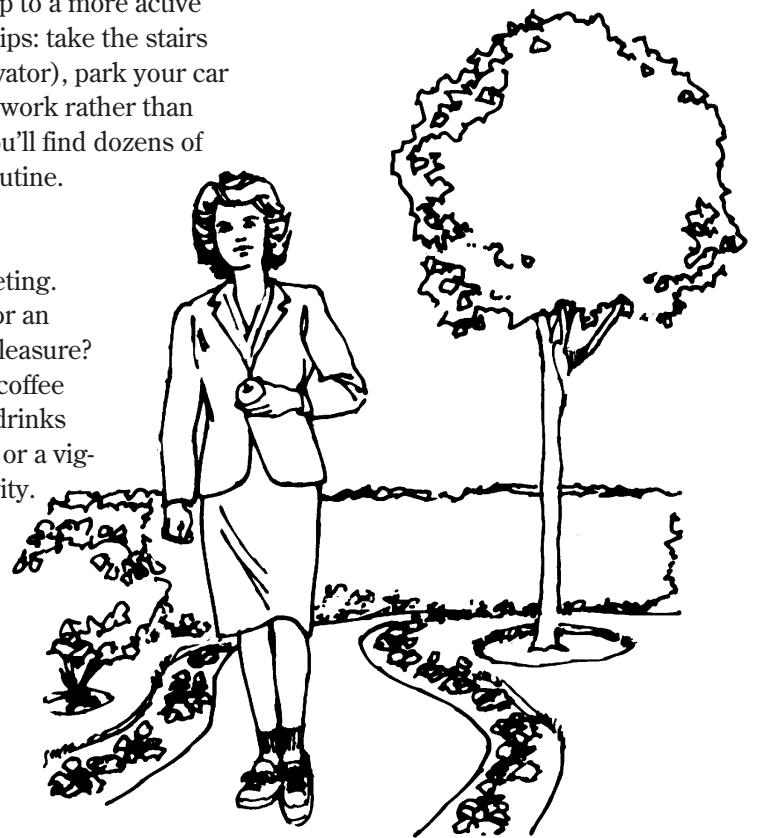
## **SCHEDULING TIME FOR FITNESS**

Schedule your fitness time as you would an important meeting. Many business people have traded the "business lunch" for an exercise session at the gym. Why not mix business with pleasure? Take a brisk walk during your lunch hour or, instead of a coffee break, try a stretch break. Rather than joining friends for drinks after work, get together for a game of softball, racquetball or a vigorous hike. Whatever you do, stick to that scheduled activity.

## **THERE'S NO TIME LIKE THE PRESENT**

There's every reason to do something good for yourself by making fitness one of your daily priorities. By setting aside just 20 to 30 minutes, three times a week for vigorous activity, and by sneaking extra activity into your daily routines, you can become fitter, happier and more productive. Why not start right now?

*With a little creativity, you'll find dozens of ways to increase the amount of movement in your daily routine!*



# Eating Before Exercise

**W**hat foods, if any, are safe to eat before exercise?

What effect does food have on exercise performance?

## Sports Diets Have Changed

At one time athletes and trainers believed that the best way to prepare for competitive events was to eat a meal high in protein. Such foods as steak and eggs were highly recommended. Sports nutritionists now recognize that excessive protein does not improve athletic performance. The best foods to improve exercise performance are those that are high in calories from complex carbohydrates.

## Energy Food

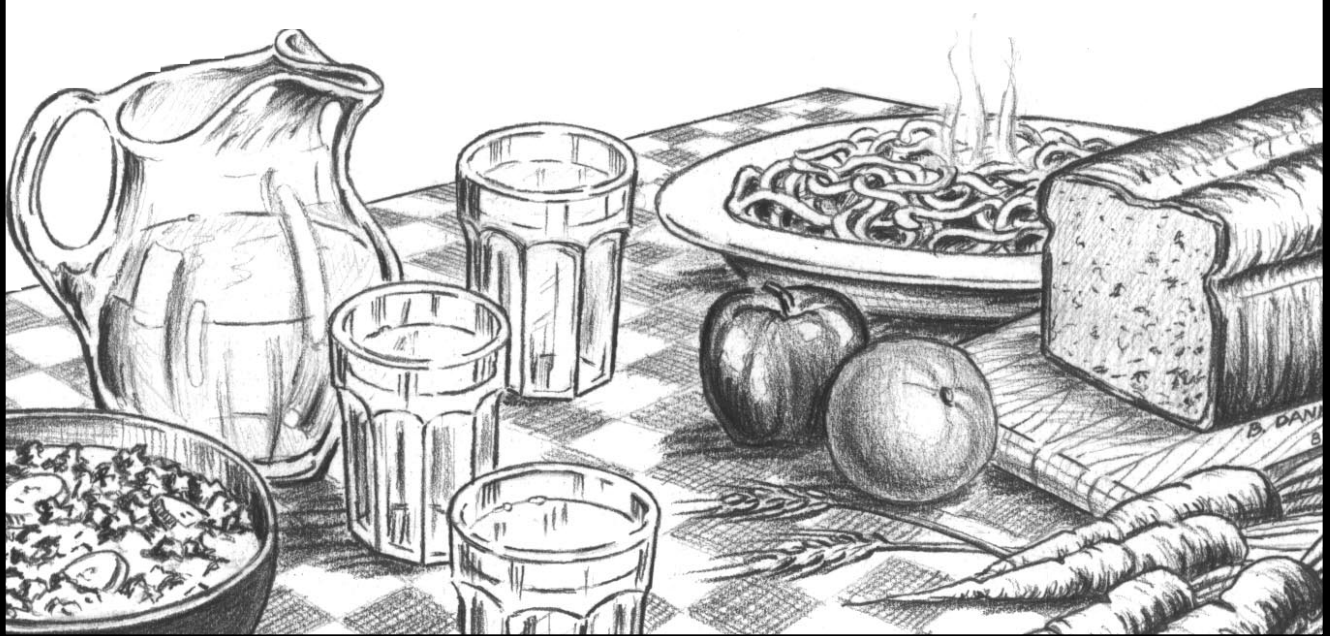
Complex carbohydrates include breads, cereals, pastas, potatoes and rice. These foods help develop glycogen, the muscle sugar that gives athletes endurance. They also happen to be the foods that nutritionists recommend we all eat more frequently.

A meal taken before strenuous exercise, such as a competitive event, should include easily digestible carbohydrates. Typical carbohydrates of this type include refined cereals, pasta and white bread. They should be eaten three to five hours before the event to allow the stomach to empty and give some time for digestion. Foods that are high in fiber or that produce gas should be avoided in the pre-

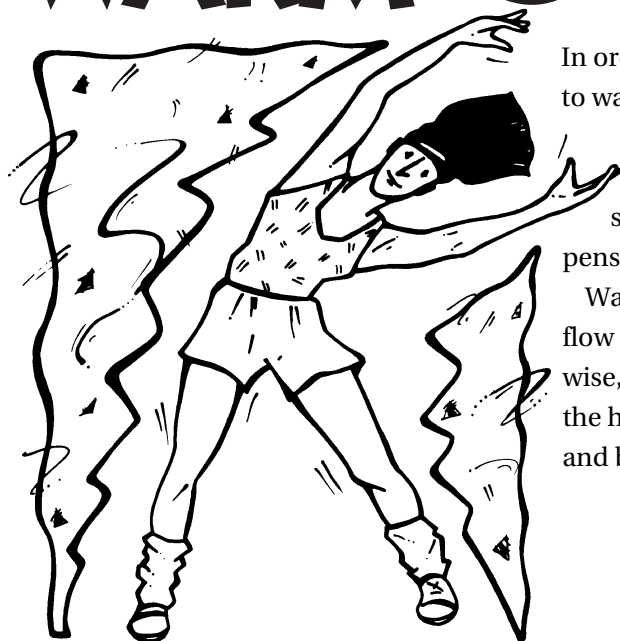
event meal. As for taking a high-sugar snack or sweet drink just before a strenuous event, that technique is still controversial.

## Good Advice vs. "Fad" Advice

What you eat does affect your athletic performance. Consult a trained sports nutritionist before making any drastic changes in your diet. Avoid fad foods such as protein powders, fasting or unusual regimens recommended by acquaintances or on the packages of such products. In sports or any strenuous exercise program, there's no substitute for proper training and good, well-timed nutrition.



# WHY? WARMUP



In order to enjoy injury-free aerobic activity, it's very important to warm up and cool down correctly. People who exercise without warming up risk muscle strains, joint injury and overall stiffness and soreness. At that point, the activity might stop being fun and turn into a chore, and when that happens, you're more likely to stop the program altogether.

Warming up muscles increases blood, oxygen and nutrient flow to their fibers, preparing them for the activity ahead. Likewise, a bit of less vigorous activity before the "real thing" gets the heart and lungs going, gradually increasing the heart rate and blood circulation.

# WHY? COOL DOWN

After exercise, it's smart to slow down and, as Satchel Paige suggested, "jangle around loosely." Cooling down slowly prevents blood from pooling in the lower extremities, and the pumping action of the leg muscles helps blood flow back to the heart. A proper cool-down allows the respiration and heartbeat to return to normal in a gradual way and lessens the possibility of muscular or skeletal injury. This is the time to fit in a few stretches, walk slowly and maybe put on a light windbreaker to avoid getting a chill.



## PARTS OF YOUR TOTAL FITNESS PICTURE

Most people don't think about it, but to exercise successfully means to *continue* to exercise. So anything you can do to prevent injury and keep it interesting is a step in the right direction. Warming up before exercising and controlled cooling down afterwards should be integral parts of your total fitness program. Not only will your workouts go more smoothly and safely, but you'll feel better the rest of the time.

# Pay Attention to Your Heart Rate

Most people know that aerobic exercise conditions the cardiovascular system. And they also know that the harder they exercise, the faster their heart beats. But some people are unsure of just how hard they should be exercising.

“Heart rate” is the term used to describe how many times the heart beats in a minute. At rest, an unconditioned heart beats about 70 times per minute. This is called the resting heart rate. At the other extreme, the fastest a heart can beat is called the maximum heart rate.

## Your Target Heart Range (THR)

In order to improve cardiovascular fitness, a person must exercise hard enough to raise the heart rate above the resting level. How high to raise the heart rate above the resting level varies from person to person, depending on age and physical condition. Generally, people are advised to exercise hard enough to raise their heart rate to 60 percent to 85 percent of their maximum heart rate. This range is known as their target heart range, or THR.

To achieve the most benefit from aerobic exercise, a person must exercise regularly and continuously in his or her THR. The target heart range is calculated by first subtracting a person's current age from 220 to determine the maximum heart rate. Then multiply that number by .6 and .85 to determine the target heart range.

For example, the target heart range for a 36-year-old woman is 110 to 166 beats per minute. Here's how it's calculated:

- 220 minus her age of 36 yields 184, her maximum heart rate
- 184 times .6 yields 110, the lower end of her target heart range
- 184 times .85 yields 156, the upper end of her target heart range.

So her THR while exercising is 110 to 156 beats per minute.

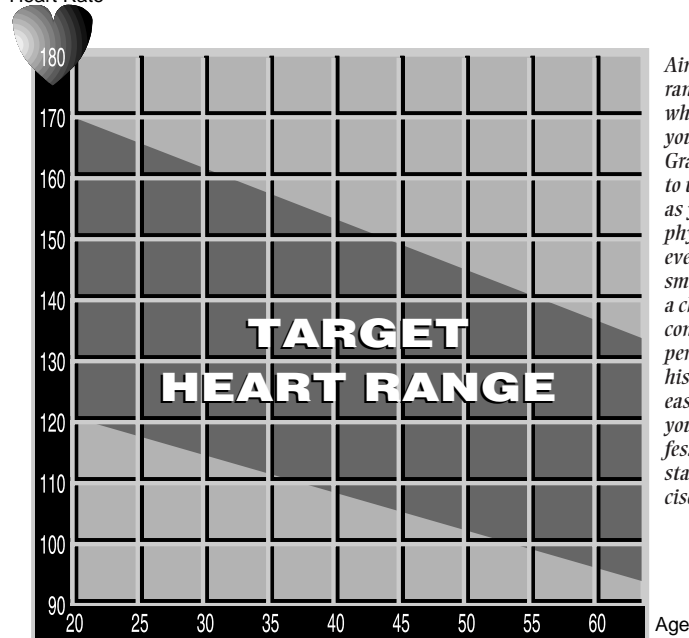
## A Short Cut to Knowing Your Heart Rate

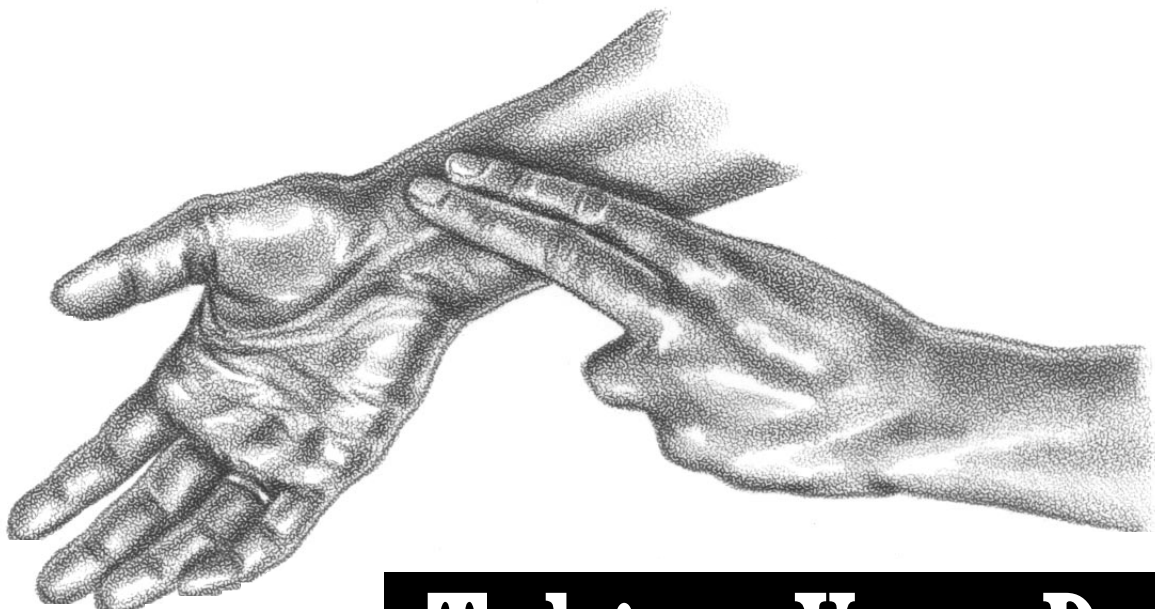
During exercise, it may be easier to count the heart beats in a

10-second interval. So divide the numbers in your THR by 6—the number of 10-second blocs in a minute. Thus, the woman in the example would aim for a heart rate of 18 ( $110 \div 6$ ) to 26 ( $156 \div 6$ ) beats every 10 seconds.

If you're over 40, at risk for a heart condition, have diabetes or are trying to control hypertension or some other disorder, consult with your healthcare provider before embarking on any exercise program. If it's OK for you to start exercising, do so within your target heart range. It will not only benefit your cardiovascular system, you'll be getting the most out of the time you spend exercising—without overdoing it.

Heart Rate





# Taking Your Pulse

In order for aerobic exercise to be effective you need to exercise within your target heart range (THR) for a minimum of 20 minutes at least three times a week. You may know how to calculate your THR (220 minus your age multiplied by .6 and by .85), but how and when do you take your pulse to know if you've reached or are maintaining your THR?

Which fingers do you use to find your pulse? Do you take your pulse on your neck or on your wrist? Do you count from "0" or from "1"? How long do you take it for? The following pointers can help answer these common questions.

## Finding and Taking Your Pulse

Before you can take your pulse, you have to find it. Use the pads of your index and middle fingers to find the pulse on your opposite wrist. Feel for the base of your thumb with the hand turned upward. Move your fingers to just about an inch below the thumb base and press down lightly until you feel an intermittent throbbing sensation in your wrist. That's your pulse.

If you prefer to take your pulse on the side of your neck, lift your chin slightly and feel around for a pulse in the soft spot on your throat just to the side of your "Adam's apple." Be careful not to restrict the blood flow to your head when pressing to find and feel a pulse.

Once you've found it, look at a clock or watch with a second hand and start counting the number of beats for a period of 10 seconds. Begin your count with "0." Look away from the clock while counting and then look back to see when the 10 seconds are up. Multiply the number of heartbeats by six to find out your heartbeats per minute.

## When To Take Your Pulse

Before you try to find your exercising pulse, it may help to practice taking your pulse while doing other activities. For instance, take your pulse while lying down, sitting, standing and jogging in place. You'll notice that as your level of activity increases so does the number of heartbeats per minute.

During exercise, it's best to take your pulse about five minutes into your exercise session to see if you've reached your THR. If you haven't, slightly increase your level of activity and take your pulse again in five minutes. Once you've reached your THR, maintain that level of activity for at least 20 minutes more before cooling down. Remember, if you reach a point where you are breathless or unable to talk, decrease your level of activity. You are probably pushing the upper range of your THR.

It's also a good idea to take your pulse after cooling down to help determine how long it takes for your heart to return to its resting rate. The more fit you become, the less time it will take for your heart to return to its resting rate.

## A Valuable Skill

As simple as it seems, learning to take your pulse accurately is a valuable skill for everyone but particularly for the active person. By learning how to take your pulse properly, you can gauge the intensity of your activities and modify your exercise plan accordingly. You will also be able to measure your progress by tracking your resting pulse rate.

# Sensible Shoes

## Choosing the Right Exercise Shoes

When most of us were kids, there was only one kind of exercise shoe—the canvas-topped, rubber-soled footwear commonly known as sneakers (or in some quarters, as tennis shoes). Our only choice regarding these shoes was whether to purchase the regular-cut or high-top variety. Now, however, with the fitness movement in full swing, our choice of exercise shoes seems limitless. How can you be sure that you've chosen the right footwear for your activity? These guidelines can help you.



### Running Shoes

Activities where your feet strike the ground forcefully for an extended period of time (such as running and jogging), require shoes with adequate cushioning for shock-absorption. Shoes for these activities must also provide arch and

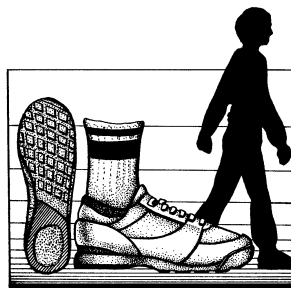
heel support plus a wide heel base to prevent your foot from rolling sideways. Padded heels to protect the Achilles' tendon are likewise important.



### Aerobic Shoes

Like running and jogging, aerobic dance can be a high-impact activity. Aerobic shoes should have well-cushioned soles and good overall support. Aerobic shoes have a relatively narrow and low

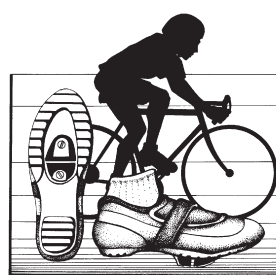
heel to allow for sideways movement. Aerobic shoes also require firm, yet flexible soles for ease of movement. If you suffer from weak ankles, a high-top variety can provide additional ankle support.



### Walking Shoes

When selecting a good walking shoe, choose one with flexible soles. Heel cushioning is important, since this is where your foot strikes the ground. However, since your foot rolls forward as you walk, too much cushioning in

the front part of the shoe may make you trip. Running shoes make excellent walking shoes.



### Specialty Shoes

There are numerous types of footwear designed for specific sports: bicycling, golf, football, baseball, skiing and so on. Each shoe has characteristics designed to improve comfort and performance for specified activities. No matter what

your activity, the key to the right shoe is that it fits and provides adequate support and stability.

## Does the Shoe Fit?

A properly fitting shoe should allow enough toe room when you're standing so that neither the big toe nor the little toe extend over the sole of the shoe. The heel of the shoe should feel snug without pinching. For the best support, the inner side of exercise shoes should prevent the foot from collapsing inward. An arch support that conforms to your foot is also important for good fit, support and comfort.

## Then Wear It!

Whether you run, jog, walk or dance, shoes can make a difference. The best exercise shoe is one that fits your foot. Try on several pairs of shoes by various manufacturers before making your final selection. New shoes require a break-in period, so limit the wearing time during your first few workouts. Shoes are perhaps the most basic piece of "equipment" for any sport, so make sure your shoe has the right fit—then wear it.

# Fit at Any Age

**N**ot only is it never too late to get fit, but it's even more important to make fitness a priority as you mature. Many of the common complaints associated with the aging process—joint stiffness, weight gain, fatigue and loss of bone mass, among others—can be prevented by adopting a regular plan of physical fitness. Keeping your muscles conditioned and your heart strong and efficient can offset these minor complaints and may help reduce your risk of more serious conditions, such as hypertension, heart disease and circulatory problems.

## Fit Muscles

Muscles make you move and support your skeleton. But as you age, muscles and bones tend to lose mass and weaken, which can lead to poor posture and a limited range of motion. To prevent this from happening, it's helpful to do muscular conditioning and flexibility exercises.

Muscles and bones grow stronger by working against progressively increased resistance. The more demand you put on a muscle over a period of time, the larger and stronger it will grow to meet that demand. Exercises such as weight lifting, leg-lifts and standard push-ups are all muscle-strengthening exercises. Like an unused rubber band, unused muscles can become stiff and tight. By gently stretching your muscles throughout the day, you can remain limber and improve your ability to move through a wide range of motions.

## Fit Heart

As we age, the heart muscle becomes more fatty and less muscular. The insides of the blood vessels narrow, and elastic-like fibers inside the arteries

begin to stiffen. To keep your heart in condition, heart-strengthening aerobic exercise is of primary importance. But many mature adults think aerobic exercise involves wearing unflattering leotards or running a four-minute mile. Fortunately, you don't have to do either to condition your heart and lungs. Walking is one of the best cardiovascular conditioners and can be done by almost anyone, regardless of age or physical condition. The key to successful walking is to walk briskly enough to keep your heart beating in its target heart range (THR) for 20 to 30 minutes.

## What Part Does Your Target Heart Range Play?

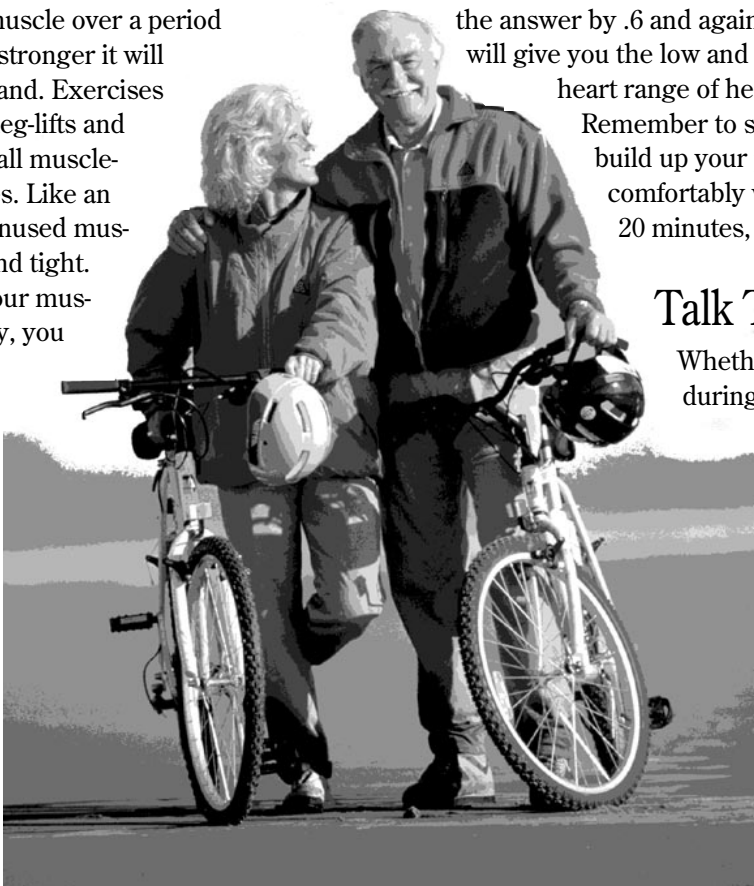
Your target heart range (THR) is the safest and most beneficial range of heartbeats per minute during exercise. While many factors, such as your overall health and medical history, can affect your THR, a basic guideline is to subtract your age from 220 and multiply the answer by .6 and again by .85. The two numbers will give you the low and high ends of your target heart range of heartbeats per minute.

Remember to start slowly and gradually build up your pace until you can exercise comfortably within your THR for at least 20 minutes, at least three times a week.

## Talk Test

Whether you check your THR during each workout, adjust your pace so that it's brisk but you're not out of breath. Use the talk test...always be able to carry on a conversation during cardiovascular conditioning.

*NOTE: Mature adults on medications should check with their healthcare professionals to see if their medication might affect their exercising heart rate.*



# Tips for Exercising Safely

There's hardly an athlete alive—amateur or professional—who hasn't known the pain, disappointment and frustration that can result from a fitness-related injury. While some accidents are beyond our control, the vast majority of fitness injuries can be prevented by following these guidelines for exercising safely.

## **Warm Up and Cool Down**

The most important times for preventing fitness injuries occur while you're not even engaged in your activity. The periods before and after exercise are critical times for preventing unnecessary pain and injury. By warming up for five minutes prior to exercise with gentle activities, such as running in place, or a slower version of your activity, you can increase the blood flow to inactive muscles and gradually raise your heart rate to its target zone. Similarly, you can gradually lower your heart rate to its resting rate by simply walking for five minutes or so after vigorous exercise.



## **Stretch**

Gentle static stretching is actually a part of the warm up/cool down process. Stretching before exercise limbers tight muscles and improves joint flexibility, thereby reducing your risk of sprains and strains. Concentrate on stretching those muscle groups used in your particular activity. For example, runners will want to concentrate on stretching out the legs, while swimmers will want to pay extra attention to upper body muscles. Static stretching for a few minutes after exercise is also recommended to prevent muscle soreness and to improve your overall level of flexibility.

## **Use the Right Equipment**

Improper equipment—worn exercise shoes or an ill-fitting



bicycle, for instance—can cause more harm than is generally realized. Always check your equipment before and after your activity and be sure to make replacements or repairs promptly. Your worn out running shoes may bring you “good luck,” but they can also bring you an ankle or leg injury if they fail to support your foot properly. Even though cycling places less stress on bones and joints than other high-impact sports, an ill-fitting bicycle can lead to back and knee pain or injury. Whatever your activity, be sure that your equipment is in top condition before risking your health and safety.

## **Use Safety Devices**

Helmets, goggles, gloves, mitts, braces, guards, pads and even sunscreen, are just a few of the numerous safety

accessories available for today's active person. Each activity carries its own risks, and which devices you use will depend on your particular activity. The point, however, is to use them. While some safety gear may feel awkward or “look funny,” keep in mind that such minor inconveniences are far outweighed by the risk reduction you'll enjoy.



## **Use Common Sense**

The most important factor in fitness injury prevention is common sense. Be patient. Rather than suddenly “diving” right into a vigorous activity, make sure your muscles are conditioned and use the right equipment, safety devices and accessories. Fitness should be fun. The best way to enjoy your activity and prevent unnecessary injuries is to use your common sense.



# Are You Overtraining?

## *Recognizing the Warning Signs*

Energy is a cycle of activity, fatigue and recovery. When we fail to allow adequate time for recovery, we may begin to notice a decline in our level of performance—not only in sports but in everyday activities. Knowing the symptoms of overtraining can help you recognize when it's time to take a break and give your body time to recuperate. If you recognize any of the following warning signs, take a few days off from your normal activity to evaluate your training schedule and give yourself a chance to recover your energy.

### WARNING SIGNS

- An elevated resting heart rate
- Persistent muscle soreness
- Chronic fatigue
- A decline in performance
- Excessive thirst
- Unexplained weight loss
- Irritability
- A loss of appetite
- More colds and infections than normal
- Changes in sleep patterns
- In women, a lack of menstruation

### *If Symptoms Persist*

Each of the symptoms listed may be associated with other physical conditions unrelated to overtraining. If your symptoms persist after three days of recovery, call your physician, who can rule out other medical reasons for your problem.

# RICEing Fitness Injuries

The most common fitness injuries are soft-tissue injuries —sprains, strains, muscle pulls and bruises. While the best means of dealing with sports injuries is prevention, accidents do occur, and knowing what to do first if you should become injured can help prevent further damage as well as help speed your recovery. For most soft-tissue injuries, the first-aid treatment is R.I.C.E.:

**Rest, Ice, Compression and Elevation.**

## Rest

Rest means restricting movement. As soon as you experience pain, stop your activity. Forget the old saw “No pain, no gain.” Pain is your body’s way of telling you that something’s wrong, so don’t ignore the message. By resting an injury for the first few days, you’ll help stop excess bleeding, whether internal or external, and will promote the healing of damaged tissues without complications. Sometimes splints, tapes or bandages are necessary to prevent unnecessary or accidental movement.

## Ice

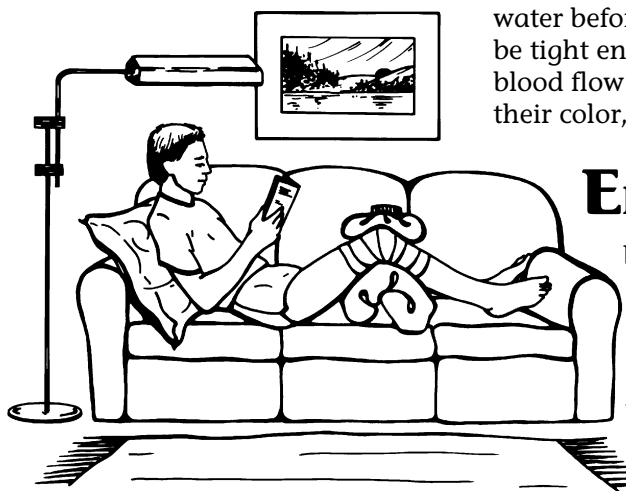
Applying cold compresses to soft-tissue injuries reduces bleeding and swelling (caused by the pooling of blood). Cold tends to narrow blood vessels. The preferred schedule for applying ice to such injuries is 10 minutes on and five to 10 minutes off. Always wrap ice or compresses in an absorbent towel or cloth, since applying ice directly (or even wrapped in plastic) can cause frostbite and additional injury. Use cold compresses for up to 24 hours following an injury. Once pain and swelling subside, usually after two or three applications, stop using the cold compresses.

## Compression

Compression, or pressure, helps to reduce swelling and painful blood flow to the injured area. Apply pressure by wrapping the injury with an elastic bandage. Feet, ankles and hands may instead be taped by someone experienced in that technique. Compression should always be used with a cold pack. You can even soak your pressure bandage in cold water before application to aid cooling. While pressure bandages must be tight enough to restrict excessive blood flow, they should not cut off blood flow altogether. If your toes or fingers begin to feel numb or lose their color, loosen the bandage or tape!

## Elevation

Elevating the injured area reduces internal bleeding and the pooling of blood in the area and helps blood return to the heart more easily. To be most effective, the injured area should be elevated above heart level. Keep the injured area elevated whenever possible, not just while a cold compress is being used. Elevation also helps eliminate pain by reducing the “throbbing” sensation caused by blood being pumped through the injury site.



## When To Call for Help

While many minor fitness injuries can be treated safely at home, never hesitate to call a healthcare professional if a more serious injury is suspected. If you are unable to move the affected area or immediate, severe swelling occurs, you may have broken a bone. This requires prompt, professional treatment. If in doubt, seek professional medical help.

# Replacing Fluids Lost From Exercise

**D**uring heavy exercise, the athlete's body relies on sweating to remove the tremendous amount of heat that's produced. It's not unusual for endurance athletes to sweat off two to four quarts of water per hour during an event. On a warm day, a runner can lose a cup of water every mile. Failing to replace water lost can result in dangerous dehydration and heat-stroke, especially in hot weather.

## Fluids to the Rescue

To keep from dangerously overheating, athletes need to replace fluids as they're lost. To keep pace, the athlete should drink:

- at least 2½ cups—or 20 ounces—of fluid two hours before an event.
- 2 more cups 10 to 15 minutes before the event.
- a half to 1 cup every 15 minutes during the event.
- more fluids after the event until weight lost during the event is regained.

## Recommended Fluids

Plain water is excellent for replacing lost fluids. Fruit juices may be used to provide energy along with replacing fluid, provided they're diluted to no more than 10 percent sugar, usually by mixing the juice with an equal amount of water. Sports drinks that are below 10 percent sugar are also acceptable. Fluids may be chilled to help cool the body. Contrary to popular belief, chilled fluids don't cause stomach cramps or overheating, and they actually enter the system faster than warm fluids.

## Avoiding Dehydration

During an event, follow the above guidelines for fluid intake, whether you feel thirsty or not. Avoid coffee, tea or alcohol, which actually rob the body of fluids. Stay away from salt tablets unless your doctor recommends them. Learn to recognize the danger signs of dehydration and heat injury:

- chills
- a throbbing pressure in the head
- shakiness
- nausea
- dry skin
- disorientation
- lack of urination within an hour after the event

Getting enough fluids during exercise will help you turn in your best possible performance.

# Sports Drinks

A bewildering variety of specialized drinks is now available to the serious athlete. Most of these drinks are designed to replace the exercise-induced loss of fluids, electrolytes, carbohydrates or all three. Other drinks are specially designed for carbohydrate-loading before an event.

## What Do Sports Drinks Do?

The most important function of any sports drink is to replace the fluids lost during exercise, a function that plain water serves just as well. Although many sports drinks feature added electrolytes, such as sodium, potassium and chloride, most athletes don't need such additives. However, athletes engaging in extreme endurance events of four hours or more may need sodium replacement. In addition, some researchers believe that a small amount of sodium in the drink helps to speed the fluid into the body from the stomach.

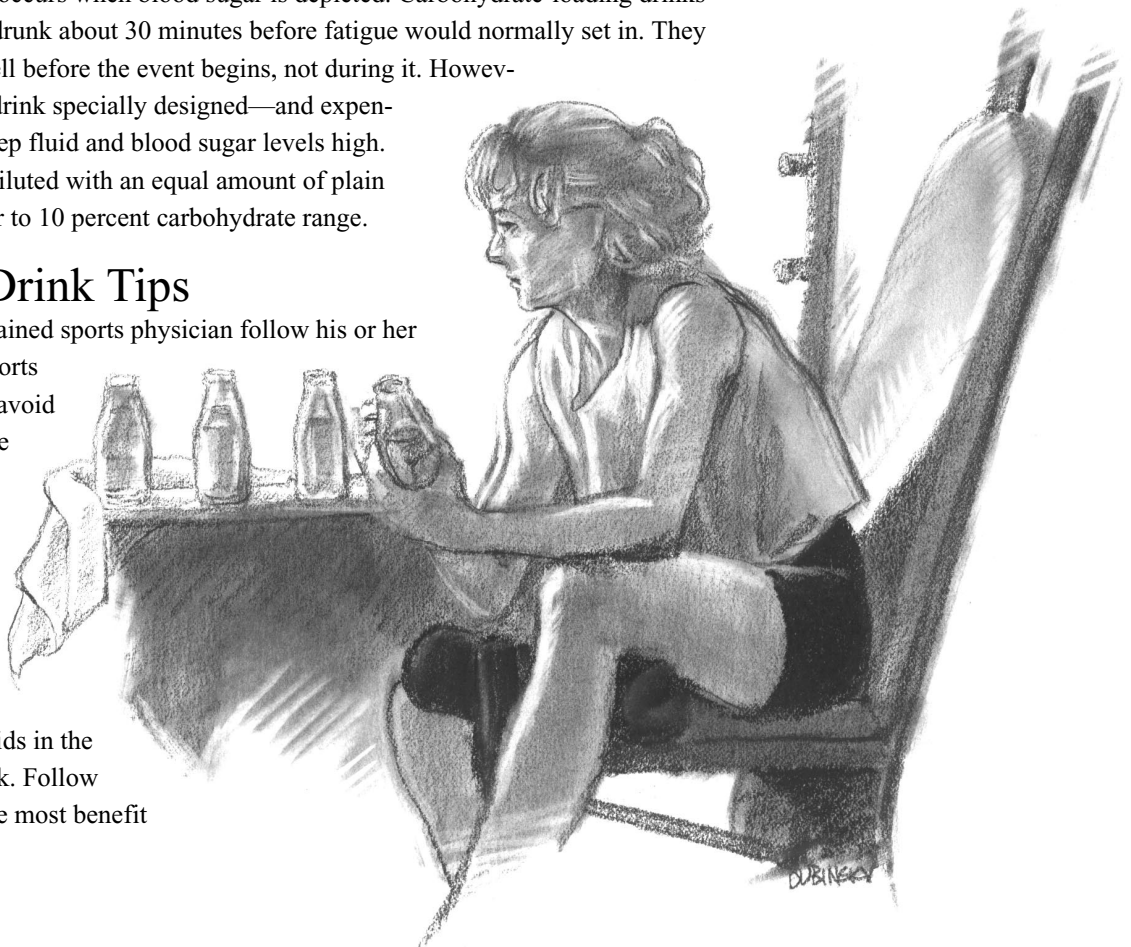
## Carbohydrate-Loading

Most sports drinks contain some form of carbohydrate, in the form of sugar or larger molecules called glucose polymers. Carbohydrate drinks that contain between four and 10 percent of such carbohydrates can be used in place of plain water during an event and can help postpone the exhaustion that occurs when blood sugar is depleted. Carbohydrate-loading drinks are most valuable when drunk about 30 minutes before fatigue would normally set in. They are meant to be drunk well before the event begins, not during it. However, it is not necessary to drink specially designed—and expensive—sports drinks to keep fluid and blood sugar levels high. Most fruit juices, when diluted with an equal amount of plain water, fall within the four to 10 percent carbohydrate range.

## More Sports Drink Tips

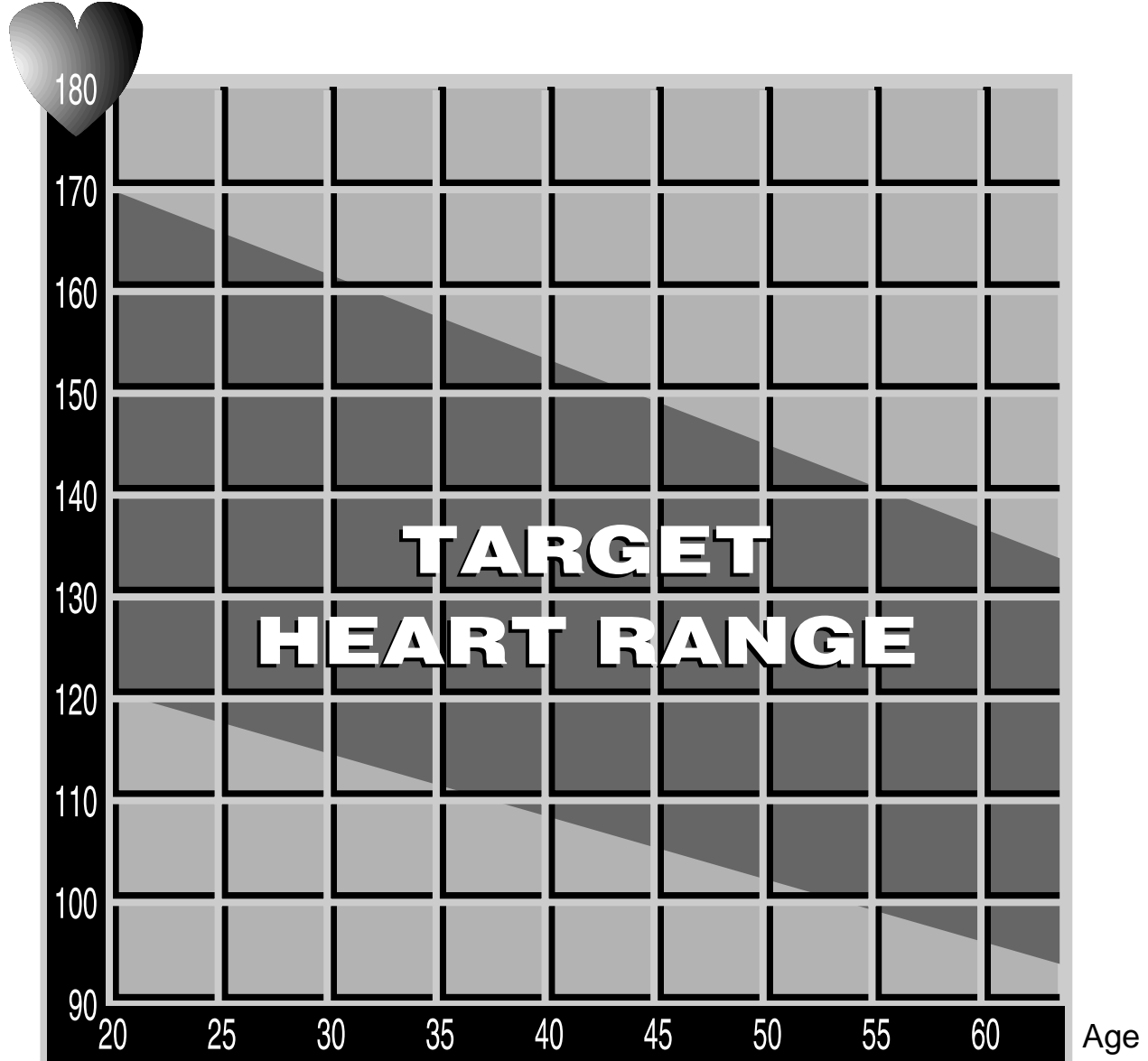
If you have access to a trained sports physician follow his or her advice when choosing sports drinks. During an event, avoid drinks containing fructose or those with more than 10 percent carbohydrate. They cause the drink to remain in the stomach too long. Have your drink chilled if possible. Chilling doesn't cause stomach cramps, and it aids in the cooling effect of the drink. Follow these guidelines to get the most benefit from sports drinks.

*“...it is not necessary to drink specially designed—and expensive—sports drinks to keep fluid and blood sugar levels high”*



# Your Target Heart Range

Heart Rate



Your target heart range (THR) is the appropriate range of heartbeats per minute during exercise for your age and physical condition. Aim for the low range of your THR when you first begin your fitness plan, sustaining that heart rate for at least 20 minutes. Gradually work up to the higher end of your range as you become more physically fit. However, if you are a smoker, suffer from a chronic medical condition or have a personal or family history of heart disease, check with your healthcare professional before starting any exercise program.

# The FIT Formula



**Frequency**—exercise vigorously at least three times a week.

**Intensity**—exercise should raise your heartbeat to its target heart range (THR).

**Time**—maintain your THR for 20 to 30 minutes.

# First Aid for Sports Injuries:

# RICE!

**R**est

*restrict movement*

**I**ce

*apply cold compresses*

**C**ompression

*apply a pressure bandage*

**E**levation

*keep the injured part raised above heart level*



# The Components of Total Fitness



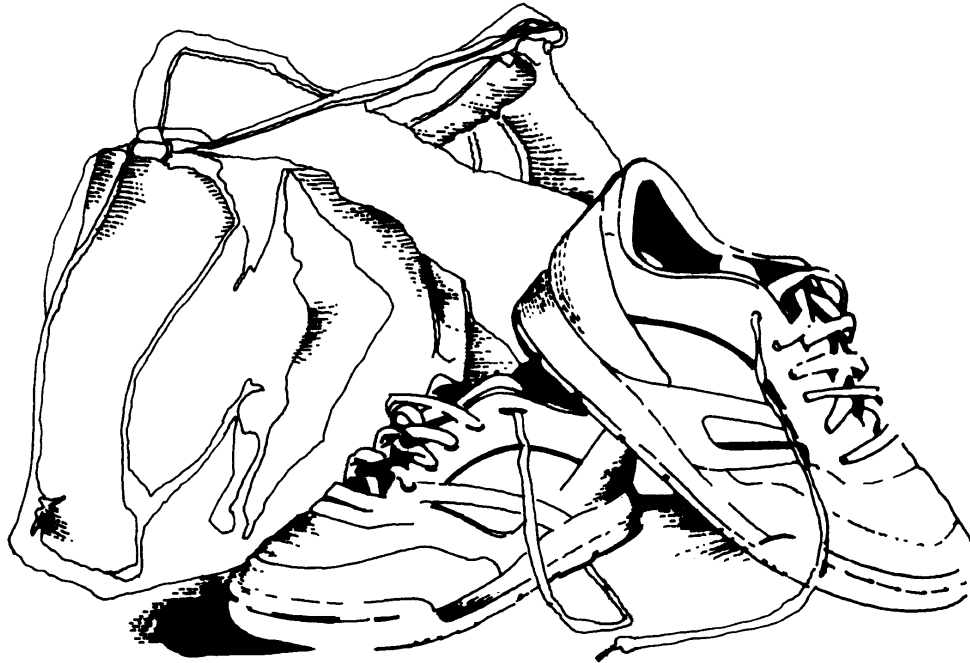
**Cardiovascular conditioning**

**Muscle strength and endurance**

**Body composition—  
an ideal percentage of body fat**

**Muscle flexibility and joint mobility**

**Low fat, high  
carbohydrate diet**



# Exercise Shoes

*Look for:*

- ▶ Adequate **toe room**
- ▶ Snug **heels**
- ▶ Flexible **soles**
- ▶ Firm **arch supports**
- ▶ Well-cushioned **impact points**
- ▶ Model **specific** to your activity

# Getting & Keeping Fit

## Exercise Basics

## Nutrition Basics

## Cooking & Eating Right

<b>Test Your Endurance: The Step Test</b>	<b>Ankle Injuries</b>
<b>Test Your Flexibility: Reach and Pull Tests</b>	<b>Ankle Sprains</b>
<b>Test Your Strength: Resistance Tests</b>	<b>Shoulder Injuries</b>
<b>Choosing Exercise Equipment for Your Home</b>	<b>Shin Splints</b>
<b>Cross Training</b>	<b>Low Back Injuries</b>
<b>Cross-Country Skiing</b>	<b>Aerobic Dance Injuries</b>
<b>Low-Impact Aerobic Dance</b>	<b>Hamstring Injuries</b>
<b>Rowing</b>	<b>Groin Injuries</b>
<b>Running and Jogging</b>	<b>Foot Injuries</b>
<b>Stair Climbing</b>	<b>Knee Injuries</b>
<b>Step Training</b>	<b>Charley Horses</b>
<b>Swimming</b>	<b>Tendinitis</b>
<b>Walking</b>	<b>Athlete's Foot</b>
<b>Weight Training</b>	<b>Running Injuries</b>
<b>Preventing Fitness Injuries</b>	<b>Walking Injuries</b>
<b>Achilles' Tendinitis</b>	



# Test Your Endurance

## THE STEP TEST

In order to establish fitness goals, it helps to assess your physical strengths and weaknesses. The following test can help you determine your endurance: the length of time you can perform a repeated action before becoming fatigued.

*NOTE: If you're over 40, a smoker, currently leading an inactive lifestyle or have a personal or family history of heart disease or other chronic medical conditions, check with a healthcare professional before performing this test. If at any point during this activity, you experience pain, discomfort or shortness of breath, discontinue the exercise immediately.*

### The Step Test

To perform this test, you'll need a sturdy stepladder, stool or box (one that can support your full body weight) approximately 12 inches high. Alternating your feet, step on and off the stool 24 times a minute, one up-and-down step about every 2½ seconds. Continue stepping up and down for three minutes, keeping the pace of 24 steps a minute. As soon as you're done, check your heart rate by counting your pulse (on your wrist or neck) for 10 seconds and multiply that sum by six to determine heartbeats per minute. Then refer to the table at left to judge your level of endurance.

Heartbeats per Minute	Level of Endurance
Over 125	Poor
121–125	Fair
111–120	Average
91–110	Good
90 and Below	Excellent



## Reach and Pull Tests

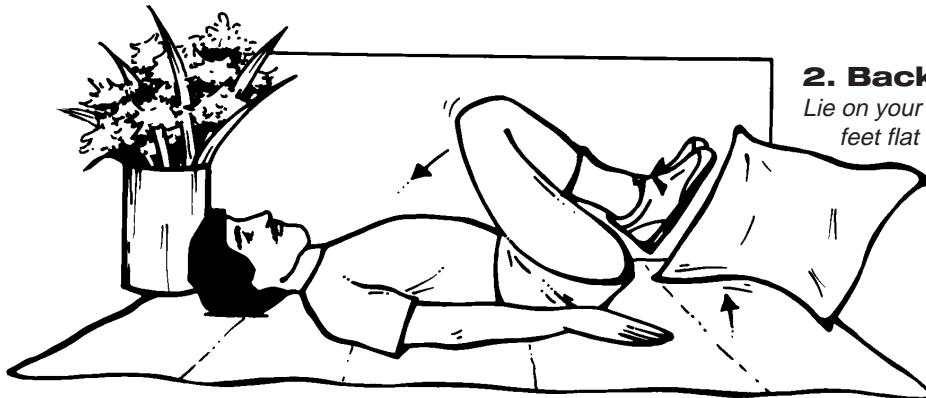


### 1. Hand-to-Shoulder Reach

From a standing position, bend your left arm at the elbow and reach behind and across your back. Try to stretch your left hand to your right shoulder blade. Hold for 10 to 20 seconds. Repeat the sequence, touching your right hand to your left shoulder blade.

# Test Your Flexibility

In order to establish fitness goals, it helps to assess your physical strengths and weaknesses. These tests can help you determine your flexibility—your ability to move freely without strain or resistance.



### 2. Back Stretch

Lie on your back with knees bent and feet flat on the floor. Slowly raise your knees to touch your chest. Hold for 10 to 20 seconds.

### 3. Quadriceps Pull

Lie on your stomach with knees bent. Slowly touch your heels to your buttocks. You can hold onto your ankles to assist your stretch. Hold for 10 to 20 seconds.



## Results

If you were able to perform each of the above tests without feeling strain or discomfort, you pass the flexibility test. If you were unable to touch hand to shoulder blade, knees to chest or feet to buttocks, you'll benefit by incorporating gentle stretching exercises into your regular activity program. Use these tests to monitor your progress. All exercise programs should include flexibility exercises.

*NOTE: If you're over 40, a smoker, currently inactive or have a personal or family history of heart disease or other chronic medical conditions, check with your healthcare professional before performing these tests. If at any point during this activity you experience pain, discomfort or shortness of breath, discontinue the exercise immediately. When performing these tests, never try to stretch past the point of tightness or resistance.*

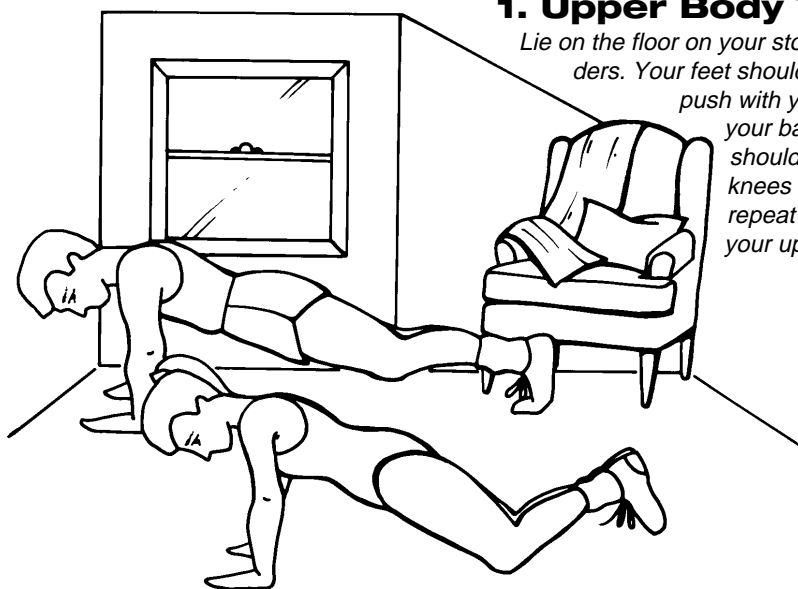
## Resistance Tests

# Test Your Strength

In order to establish fitness goals, it helps to assess your physical strengths and weaknesses. The following tests can help you determine your overall strength—the ability of your muscles to resist a progressively increased load. Use these tests to monitor your progress.

### 1. Upper Body Test

Lie on the floor on your stomach, hands placed palm-down next to your shoulders. Your feet should form a right angle to the floor. As you exhale, slowly push with your hands to raise your torso from the floor, keeping your back straight and your elbows slightly bent. (Men should keep their legs straight; women should keep bent knees on the floor.) Slowly lower yourself to the floor and repeat as many times as you can. Then refer to the table for your upper body strength level.



Number of Repetitions*	Level of Strength
0–9	Poor
10–19	Average
20–29	Good
30 and over	Excellent

\* People under age 35 should add two to each of the repetition ranges.

### 2. Abdominal Strength Test

Lie with your back and feet on the floor, keeping your knees bent and your arms crossed over your chest. As you exhale, look toward the ceiling and slowly raise your shoulders off the floor as far as you can without straining. Relax. Repeat as many times as you can. Then refer to the table for your abdominal strength level.

Number of Repetitions*	Level of Strength
0–15	Poor
15–30	Average
31–45	Good
45 and over	Excellent

\* People under age 35 should add two to each of the repetition ranges.



**NOTE:** If you are over 40, a smoker, currently inactive or have a personal or family history of heart disease or other chronic medical conditions, check with your healthcare professional before performing these tests. If at any point during this activity you experience pain, discomfort or shortness of breath, discontinue the exercise immediately. When performing these tests, never try to stretch past the point of tightness or resistance.

# A Homemade Workout

## CHOOSING EXERCISE EQUIPMENT FOR YOUR HOME

Some people love the social aspects of working out but can't seem to find the time (or motivation) to get to the gym. Others may enjoy outdoor workouts but find that inclement weather thwarts their best intentions to exercise. In either case, a home "gym" can be the solution. Home exercise equipment is available in a variety of price ranges and affords you the luxury of working out whenever you wish in the privacy of your own home.

### Stationary Bicycles

Stationary bicycles can range in cost from \$100 to \$600, and, as in most things, you get what you pay for. The more expensive models feature electronic measurement devices that can track heart rate and calories burned and intricate flywheel systems that adjust pedal resistance. An indoor stand for your outdoor bike is also an economical option. In order to achieve aerobic benefit from cycling, you must exercise within your target heart range (220 minus your age multiplied by .60 and by .85) for 20 to 30 minutes at least three times a week. Many indoor cyclists like to cycle while reading or watching TV to prevent boredom.

### Strength-Training Machines

To build strength, a muscle must be progressively "overloaded"—that is, it must work against increasing amounts of resistance. Free weights are the least expensive strength-training devices but are not always recommended for the home athlete, since improper lifting can lead to serious injury. More expensive, but safer, are resistance machines that isolate specific muscle groups. These home gyms range in price from \$500 to over \$1,500. Cable models that use your own body weight for resistance are generally the least expensive. Multistation machines (similar to those found in most professional gyms) are the most expensive but do offer a total body workout.

### Home Sweet Gym

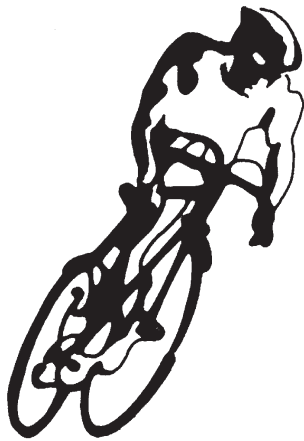
Home exercise equipment makes sense for many people. Whether you have \$200 or \$2,000 to invest in your home gym, you can find a variety of exercise equipment to suit your personal needs. When purchasing exercise equipment, stick to reputable manufacturers who guarantee their products in writing. Then enjoy the comforts of home at your own personal gym.

### Stair Climber Machines

Nothing could be easier. You get on the two movable "steps" and raise and lower your feet alternately while staying in one spot. The rhythmic resistance of your body weight against gravity provides the non-impact aerobic workout. Like cross-country ski machines, climbers are good calorie burners when used for 30 minutes three times a week. (Both machines are recommended for those who have been working out regularly rather than beginners who have been sedentary.) Climbers cost anywhere from \$125 (models with two "paddles" that the feet pump) to the top-of-the-line \$2,500 models, which include computerized programs for different warm-up, workout and cool down sessions and a "down" escalator system to climb, rather than separate steps.

### Cross-Country Ski Machines

A standard 30-minute workout on a cross-country ski machine just three times a week is an excellent workout. Such machines are quite safe: They are non-impact, so that joints and knees glide smoothly rather than pound, and there is very little risk of muscle strain. Most machines allow the "skier" to pre-adjust resistance for maximum benefit, and, when swinging the arms as well as the legs, all the major muscle groups get a good workout. These machines run about \$100 for a bare-bones version to \$600 for models that record your time, distance and miles per hour.



# Cross Training

Cross training is an exercise technique using several different types of activities to develop physical fitness. An example of a cross training event is the triathlon—usually consisting of swimming, bicycling and running.

## VARIETY IS THE SPICE OF EXERCISE

No matter how perfect any one physical activity is, it's not likely to exercise all the muscles of the body equally. Cross training offers a chance to include more muscle groups in the daily or weekly workout schedule than one activity allows. Another advantage of cross training is that most people find it more interesting than simply doing the same thing over and over again. Then there is the practical safety advantage: Cross training reduces the likelihood of injury simply because the participant doesn't overdo one type of exercise.

## COMPONENTS OF CROSS TRAINING

Good cross training combinations are those that focus on different parts of the body. For instance, while running primarily uses the muscles of the lower body, swimming works the muscles of the upper body. Other cross training options include:

- cycling
- cross-country skiing
- rowing
- skating
- rope jumping
- walking

Many experts recommend adding strength training, such as weight-lifting or using weight-training equipment, to a cross-training program.

## PART OF TRAINING IS PLANNING

It's helpful to plan your cross-training activities in advance. A week of daily activities could include cycling, weight training, rowing, calisthenics and roller skating. Even if you are highly trained in one activity, take it easy when you start another one. Each time you use your muscles in a different manner there is a potential for muscle soreness. Remember to “cool down” gradually after any strenuous activity. And as always, if you have any health restrictions, consult your healthcare provider before embarking on a new activity.





# Cross-Country Skiing

Sometimes referred to as “the king of aerobic exercise,” cross-country skiing provides an excellent full-body workout. It’s more strenuous than running yet has a low risk of injury, because the movements are gliding, not bouncy.

## Everyone Can Play

Cross-country skiing can be enjoyed by the whole family. Though it’s best to take lessons at first to learn proper technique, most people catch on quickly and can do well enough to get a good workout and enjoy themselves in the snow.

## How It Works

The skis themselves are narrow, and the skier’s heel remains free while the toes of the boot connect to the ski. Skiers propel themselves forward with a gliding motion, swinging alternating arms and legs. Poles held in each hand help with balance and gliding.

## Protective Clothing and Gear

It’s important to dress warmly but in layers for cross-country skiing, because people warm up rapidly once they begin to ski. Long underwear, tights, warm socks, a turtle-neck shirt and a Windbreaker are basic, but other essentials are a warm cap and gloves to protect the extremities from cold and high-quality sunglasses to protect the eyes from the snow’s glare.

## When and Where

An extremely enjoyable sport and excellent aerobic exercise, cross-country skiing can be done anywhere there is snow, not just up in the mountains. And with modern machines that simulate cross-country skiing you can gain its aerobic benefits in the privacy of your own home, with perhaps a radio or TV making up for the lack of outdoor scenery. So find a snow-covered field or jogging path (or a high-quality cross-country skiing machine at any time of year), jump into your skis, and off you go!





# Low-IMPACT Aerobic Dance

As aerobic dancing has become the exercise of choice of millions of people, some adverse side effects of this type of exercise have been discovered. Studies have revealed that nearly 45 percent of aerobic dance students and 75 percent of the instructors have been injured. The continuous bouncing, hopping and jumping of high-impact aerobics can create stress on the lower body, damaging feet, ankles, shins, calves, knees, hips and backs. Fortunately, researchers have also discovered that a person can achieve the same level of fitness through *low-impact* aerobic exercise without as much danger of being sidelined by impact injuries. (There is not yet enough evidence for us to know if some forms of low-impact aerobics that include twisting and bending carry their own risks of injury.)

## What Makes Low-Impact Aerobics Different?

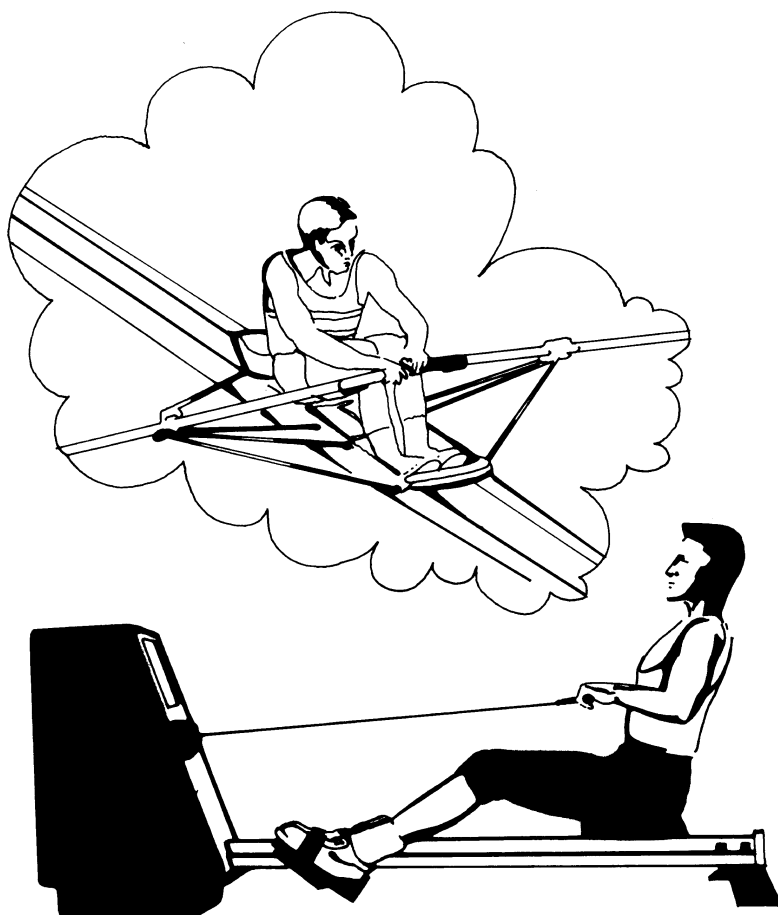
With low-impact aerobics, one foot is always touching the floor, so there's no jumping, hopping or bouncing. Keeping one foot on the floor reduces the amount of stress to the lower body and thus reduces the potential for injury. To keep the heart rate elevated, low-impact aerobics relies on more bending motions that use the large leg muscles and on upper body movements, such as biceps curls, arm presses in several directions and triceps exercises.

## Safe for Just About Everybody

Low-impact aerobic exercises are safer than high-impact aerobics and are effective for just about any healthy individual. They can be challenging to both newcomers and experienced people. This type of program is particularly appropriate for people recovering from an injury, for overweight people, for pregnant women and for older people.

## Getting Started

Low-impact aerobic programs are offered at many health clubs and community recreation centers. Exercisers may also choose from a wide variety of videos. As always, consult a healthcare professional before beginning any vigorous exercise program if you're over 40, have been sedentary or have a history of heart disease, high blood pressure or other chronic condition. Once you get the go-ahead, grab your aerobic shoes, get into some loose clothing and get moving!



# Rowing

An excellent full-body aerobic exercise, rowing can be done with or without a boat or rowing shell. People who have access to a boat and a body of water can row for fitness, not just for recreation, and most gyms have one or more versions of stationary rowing machines.

## Safe but Effective

Like cross-country skiing, rowing is an aerobic activity. It “burns” fat while keeping the risk of joint injury low. Rowing uses not only the large muscles of the legs but also the arms, back and abdominals. However, to derive the maximum benefit, it’s important not to lock any of the joints while rowing. When joints lock, much of the muscle-strengthening resistance is transmitted through the bones rather than the muscles, thus wasting much of the effort.

## A Delayed “Side Effect”

Even though rowing can strengthen the back, people with a history of back problems should consult a healthcare professional before they begin a rowing program. Those just beginning a rowing program, especially after a sedentary lifestyle, would also be wise to get professional advice first. Back pain or discomfort may not occur until a day *after* performing the exercise. Consult your gym instructor or a rowing manual for advice on getting the most out of your workout, whether it’s in the gym or on the water. Either way, your “voyage” to fitness and health should be “smooth sailing” all the way. *Bon voyage!*



# Running And Jogging

**B**y far the best known aerobic exercises, running and jogging can greatly improve aerobic conditioning in a relatively short amount of time. For the record, “jogging” means running a mile in eight minutes or more, and the more strenuous “running” means completing a mile in seven minutes or less.

People who are not accustomed to regular exercise should begin by walking, then gradually replace the time spent walking with time spent jogging. This helps the exerciser ease into a more strenuous program and reduces the risk of injury. Plan to exercise a minimum of 20 minutes at least three times a week.

## The Warm-up and Cool-down

As with any exercise, it’s important to include warm-up and cool-down periods. Stretching *before* exercise prepares the muscles by getting oxygen-rich blood to them, thus preparing them for more vigorous activity. Stretching *after* exercise helps keep muscles and joints flexible, can keep muscles from tightening up as they cool off, and helps blood in the lower extremities flow back to the heart.

## Take the “Talk Test”

Whether running or jogging, the “talk test” can determine if an exerciser is working too hard for his or her level of fitness. If the exerciser is moving too fast to converse comfortably with a companion (even an imaginary one), it’s time to slow down.

## Your Most Important Equipment

Though the number of running shoes is myriad, the important thing is to get a pair that feels right. Go to a store that specializes in runners’ equipment and ask questions, then try on a few pairs. Proper running shoes provide support, cushioning and alignment for the feet and entire body that really make a difference in the long run.

If you want to take up running or jogging and are over 40 or are not used to such effort, it would be wise to see a healthcare professional first. Knowing your physical condition can help you devise the right aerobic program for your particular needs. Once you’ve got a professional go-ahead and the right shoes (and have warmed up), you’ll be ready—and set—to go!

# Stair Climbing

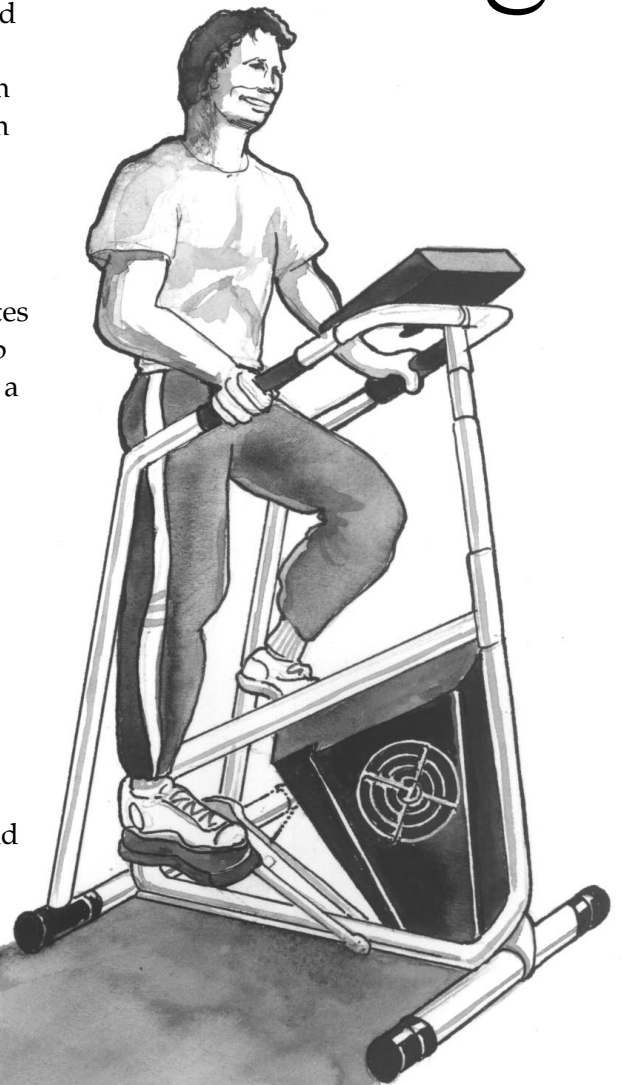
**R**ecently, stair-climbing machines, both for health clubs and home use, have become quite popular. Because the body moves against gravity with every step, stair climbing can provide an excellent aerobic and “fat-burning” workout with a moderately low risk of injury. It’s also easy for beginners, overweight people and pregnant women.

## The Unique Qualities of Stair Climbing

It’s important to note that stair-climbing equipment duplicates the movements of climbing *up* stairs, not down. Climbing up uses the large muscles of the lower body to lift the person to a higher level. Climbing up is less stressful on the joints of the ankles, knees and hips than stepping down in a forward motion. People who work in buildings with both stairs and elevators can get a little extra exercise all day long by taking the stairs up and saving the elevator for going down.

## The “Right Way” To Climb Stairs

Whether using stair-climbing equipment or actual stairs, remember to keep breathing and don’t work so hard that it would be difficult to talk out loud. Try to stand as straight as possible. If you lean over too far, you increase the strain on your low back. It’s also important to stretch your legs, hips and low back after a prolonged period of climbing stairs, since those muscle groups are the primary ones used in this exercise. When you incorporate stair climbing into your aerobic fitness plan, aim for workouts of at least 20 minutes at least three times a week. Stair climbing is one of the safest and most convenient forms of low-impact aerobics you can find.





# Step Training

In the last few years step training classes, videos and home exercise units have become very popular. An alternative to high-impact aerobics, step training still provides an excellent aerobic and “fat-burning” workout.

In step training, the exerciser has a low, box-shaped bench about three feet long and a foot-and-a-half wide. Beginners usually start with a step height of four inches, increasing the height to six to eight inches as their level of fitness improves. Advanced steppers can work off a 10- to 12-inch-high step.

## Getting the Most Out of Step Training

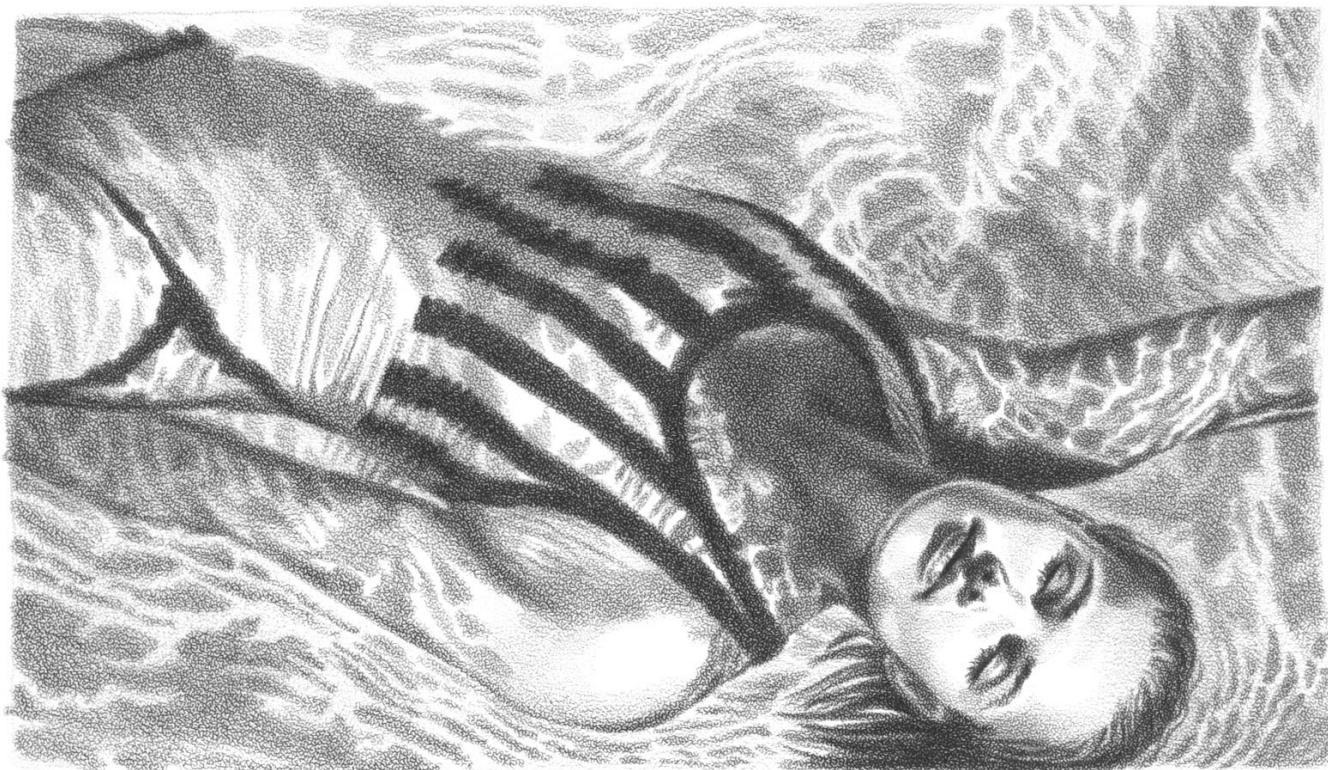
The routines can be simple or complex, but all involve stepping up, down and around the bench to music. Arm movements add intensity and work the muscles of the upper body. While some steps involve straddling the bench, most steps involve stepping up onto it, then stepping backwards to come off the bench. The exerciser never steps off the front of the bench, thus avoiding undue stress on the ankles, knees and hips. At the same time, it's important to keep ankles, knees and hips aligned while stepping up and down so that only the muscles bear the extra resistance, not the ligaments.

## Aerobic Benefits

Step training is as energy-demanding as running but applies no more force to the joints than walking, so it's an ideal exercise for the overweight and for those who want to ease into exercise. Like stair climbing, step training is an effective form of low-impact aerobics, delivering oxygen-rich blood directly to the muscles. Some form of aerobic activity is recommended at least three times a week at least 20 minutes each time for maximum cardiovascular benefit.

## Taking the First Step

Step training can be fun. For some, the combination of music and a live or videotaped instructor adds more interest than that found in jogging. The hardest part is getting started in a step-training program. Check out classes at a local health club or recreation center and consider inviting a friend to join you. Whatever helps you get started, once you do, you won't regret it.



# Swimming

About the most injury-free sport around, swimming provides good cardiovascular benefits and is great for all-over body toning. Swimming strengthens both the upper body and the large muscles of the legs, and though it may take some practice to get skilled enough for a real aerobic workout, getting there can be half the fun.

## Pick Your Stroke

The intensity of the workout can be determined by the choice of strokes. The butterfly or the crawl can be quite vigorous, while a backstroke or sidestroke can be less brisk, still improving, however, the tone and flexibility of the body. Swimming can be especially good for people easing into exercise: the overweight, the elderly, people with joint problems or pregnant women.

## Swimming Basics and Accessories

A heated pool, indoors or outdoors, is preferable, especially for beginners. Local YMCAs and recreation centers usually offer classes for all levels of swimming skill. All a swimmer really needs is a comfortable suit, but earplugs, goggles, a swimming cap or a nose clip may make some swimmers more comfortable.

## Getting Results

Swimming is the ultimate low-impact aerobic activity, since the resistance of the water is so smooth and even. A swimming specialist can help you maximize the efficiency of your stroke, time your breathing, avoid accidents and gauge your progress. Try to incorporate swimming into a fitness program that includes at least three aerobic sessions a week at least 20 minutes each time. After you see—and feel—the results, you'll hate to leave the water.



# Walking

**W**alking is the simplest, easiest and most versatile form of exercise, and it's becoming increasingly popular as an aerobic activity. Kinder to the joints and skeletal system than running or even jogging, walking can provide aerobic benefits and improve overall fitness when it's done vigorously. The average stroll takes about 25 minutes per mile, so the fitness walker should aim for about 15 minutes per mile, though it may take time to get up to that speed.

## Even Slower Walking Works

As with all true aerobic activity, vigorous walking needs a warm-up and cool-down period. Slower walking at first and a bit of stretching will usually do the trick. For people who prefer to walk at a slower pace for their entire workout, it's possible to get aerobic benefit by walking for a longer period of time. Find a green, scenic place and go for it.

## Before You Walk

The only special equipment a fitness walker needs is a comfortable pair of shoes, but it's smart to dress in layers that can be removed as your body temperature rises. Walkers need to exercise three to five days a week for 20 to 45 minutes each time if they move vigorously, and longer if they prefer a slower pace. Changing stride lengths, increasing the pace and swinging your arms all increase the intensity of the activity.

## Who Will Benefit?

Just about everyone will notice improvements in their overall health when they increase the intensity and/or time spent walking. Even people with joint pain or those who are out of shape, over 40 or who have a family history of heart disease can benefit from walking, perhaps short distances on level ground at first, once they get a healthcare professional's approval. You've been walking since infancy. Why not make walking an integral part of your fitness program?



# Weight Training

**Y**ou don't have to be a competitive body builder to enjoy the many benefits of working out with weights. Weight training can be for everyone, not just body builders. Such exercise offers many benefits, including:

- increased strength and stamina.
- greater support for the skeletal system.
- better posture, especially when the abdominals become strong.
- a firmer, trimmer body.
- increased muscle mass, which is more active tissue than fat and uses more energy, even when resting.

For many people who work out, the routine itself can be enjoyable, yielding noticeable results over time. In addition, the time spent in the methodical repetition of weight training motions can provide an opportunity to reflect on the challenges and goals of daily life, while the energy exerted is a good stress-buster.

## How Weight Training Works

The basic principle behind building muscle strength is to progressively overload a muscle on a regular basis, but not every day. People who want greater strength and muscular mass work with heavier weights or *increased resistance*, while people who want to build stamina and endurance progressively increase the *number of times* they can lift a lighter weight, called repetitions or "reps."

How one breathes during weight training can also be a crucial element of the exercise. It's important to exhale on the exertion and to inhale on the relaxing phase of each movement. (Simply remember "EXhale on EXertion.") This allows the pressure in the chest to remain as stable as possible, lowering the chance of complications for those with high blood pressure or heart trouble.

## Where to Work Out

Most people who work out with weights do so at gyms, health clubs, YMCAs, other exercise facilities or at home. People can work out with so-called free weights or barbells, though it's best to get proper instruction when doing so. Many others prefer to work with resistance machines, which selectively work isolated muscle groups through a full range of motions. Such machines are usually easier and safer for beginners.

If you're thinking about weight training and have high blood pressure, are over 40 or have a family history of heart disease or some other disorder, you may wish to consult a healthcare professional first. Once you get the go-ahead, you can start "sculpting" your body by adding muscular definition and strength. As you notice results, weight training may even help improve your self-esteem and sense of well-being.

# Preventing Fitness Injuries

Professional athletes have the benefit of expert advice on the prevention of sports injuries, but amateur athletes are usually on their own when it comes to preparing their bodies for the stresses of vigorous exercise.

## The “Rules” Before the Game

Here are some tips to help amateurs play without getting injured:

- 
- ☞ Use shoes appropriate to the sport. All popular sports have shoes designed for the surface they’re played on and the movements they require. Wearing inappropriate shoes can lead to injuries of the feet, ankles, knees, legs or spine.
  - ☞ Warm up from five to 10 minutes before any sports activity. That means stretching muscles and increasing blood circulation, especially to the parts of the body that will be most affected by the sport. For instance, before jogging do some knee-bends and ankle/calf stretches and walk a few minutes at a moderate pace.
  - ☞ Cool down after the activity. Slowing down gradually and doing some stretching prevents blood from pooling in the lower extremities, allowing the muscles to relax to a normal state, and helps blood flow back to the heart. Ignoring a cool down session can lead to muscle soreness within a day or two as well as pulls, strains or muscle spasms in future sessions.
  - ☞ Follow a program of gradual, paced improvement in a sport. Those who try to achieve a difficult goal too quickly or with insufficient preparation are asking for trouble. The body needs time to adjust to new challenges.
  - ☞ Sample a variety of sports. A particular sport could be dangerous for an individual whose body simply isn’t suited for it. There are plenty of sports to choose from.
  - ☞ Practice the sport for at least three 20-minute sessions a week. One long session a week can be too much of a shock to the body.
- 

## Before You Begin

If you are over 40, are overweight, smoke, have led a sedentary lifestyle or have had recurring health problems in the past, particularly heart problems, consult your physician before engaging in a sports program. He or she may recommend a stress test and advise you on how to prevent injuries. Once you get the go-ahead, taking precautions against injury first may be all you need to enjoy aerobic fitness as part of a sport.

# Achilles' Tendinitis

**N**amed after the Greek warrior Achilles, the Achilles' tendon is the tough, fibrous cord that attaches the calf muscle to the back of the heel. When the sheath of soft tissue surrounding the tendon becomes inflamed, the result is a condition called Achilles' tendinitis. As the condition progresses, the tendon itself begins to degenerate and can develop small bumps, called nodules, as well as small vertical tears.

## The Root—and Effects—of the Problem

Certain people may be predisposed to Achilles' tendinitis because of:

- shortened calf muscles.
- uneven leg length.
- a lack of flexibility, especially in the legs.
- a biomechanical problem, such as the feet rolling inward excessively.

Most cases of Achilles' tendinitis are brought on by placing excessive stress on the tendon, such as overuse, especially when beginners overdo it; running uphill; or running on sand.

Symptoms of Achilles' tendinitis include tenderness or pain in the heel, even on awakening; a burning sensation in the heel that lessens as the heel is used; and a return of pain when the activity stops.

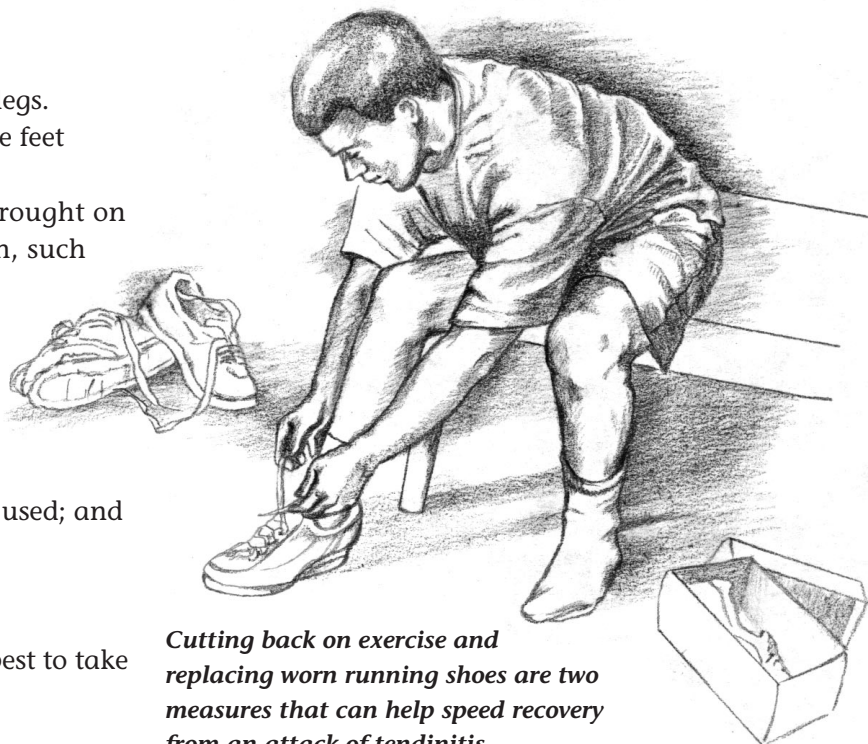
## Relief From Achilles' Tendinitis

When an attack of tendinitis occurs, it's best to take these steps:

- Cut back on exercise.
- Apply ice to the heel.
- Replace worn running shoes.
- Avoid running up or down hills.
- Wear higher-heeled shoes.
- Put a half-inch foam pad in the heel of everyday shoes to reduce pressure on the tendon.
- Begin a careful and consistent stretching program.

## Taking the Next Step

If the condition persists, despite one day of putting ice packs on the heel and several days of rest, see a healthcare provider, such as a sports medicine specialist. He or she can prescribe anti-inflammatory drugs or suggest a course of physical therapy if your heel doesn't respond. If it's a biomechanical problem, the tendinitis may be corrected with a prescription shoe insert or support, called an orthotic. You might also consider a low-impact form of aerobics, at least until the Achilles' tendinitis clears up, to take the pressure off sore tendons.



*Cutting back on exercise and replacing worn running shoes are two measures that can help speed recovery from an attack of tendinitis.*

# Ankle Injuries

Ankle injuries account for one-fourth to one-fifth of all running and jumping injuries. These injuries include sprains, fractures and dislocations.

## The Anatomy of the Ankle

Ligaments hold the bones of the ankle in place. When extreme forces act on the ankle, the ligaments may stretch or give way, resulting in a sprain. Most often, it is the outer ligaments that give way, and the ankle twists inward. Turning maneuvers and landing on uneven surfaces are common sources of ankle injuries.

## A Range of Treatments

Depending on the severity of the injury, ligaments may be stretched or torn. There may even be a fracture of one or more bones. The first treatment for all such injuries is known by the acronym RICE:

- **Rest** by keeping weight off the injured part;
- **Ice** packs for up to 24 hours, 10 to 20 minutes per session;
- **Compression** with an elastic bandage (or taping if appropriate);
- **Elevation** of the injured part above the heart when lying down.

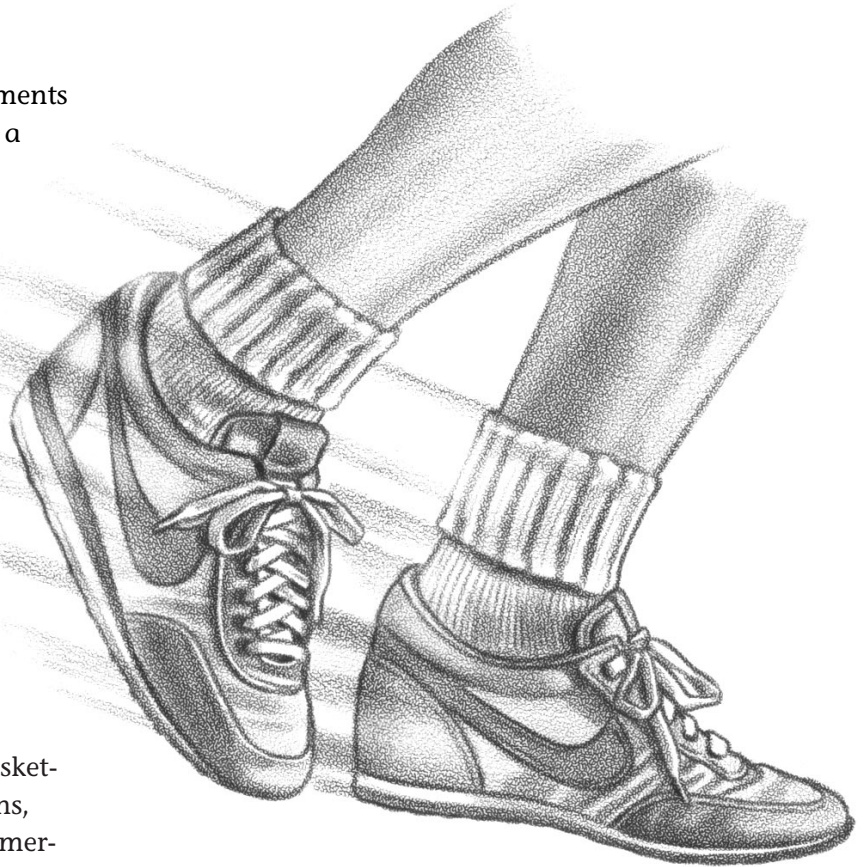
If pain and swelling persist more than a day, see a physician or podiatrist for x-rays and a medical evaluation. Further treatment ranges from simple rest to physical therapy, splinting or surgical repair, depending on the severity. Jumping, as in basketball or volleyball, can cause ankle dislocations, often with a fracture. These injuries require emergency treatment.

## Allow for a Full Recovery

Recovering from ankle injuries may be a slow process, and insufficient rehabilitation can lead to

chronic ankle problems. If you are recovering from an ankle injury, follow your physician's guidelines for rest, ankle support and rehabilitation exercises. Swimming or bicycling can be substituted for weight-bearing exercise during the recovery period. To prevent ankle injuries:

- Warm up before any strenuous activity.
- Follow a consistent training schedule.
- Wear well-fitted shoes.
- Exercise on smooth surfaces.



Ask your trainer or physical therapist to recommend ankle-strengthening exercises. Ankle injuries don't have to sideline you from vigorous exercise for long.

# Ankle Sprains

Although the term “sprained ankle” is often used loosely, a true sprain involves tears in the fibers of the ligaments that connect the bones and cartilage around the ankle. A sprain occurs when a violent twist, stretch or blow causes the joint to move outside its normal range of motion, tearing some of the tissues of the ligaments.

## When Can Sprains Occur?

Ankles can become sprained in a wide range of situations, including:

- while running or hiking on uneven ground;
- jumping up and landing wrong, as in basketball;
- wearing shoes inappropriate to a particular sport;
- getting hit during contact sports, such as football or basketball.

## Symptoms and Prognosis

No matter how an ankle sprain occurs, the symptoms usually include rapid swelling and bruising of the ankle, impaired joint function, and pain and tenderness in the ankle.

In most cases, a sprained ankle can bear weight about 24 hours after the injury and be fully healed within two weeks, but sprains vary in severity. Repeated minor sprains can lead to a weakening of the joint and to more sprains. Surgery and casts may be necessary if the health of the joint has been seriously compromised.

## Recommended Remedies

In most cases an ordinary sprain requires the following treatment, known by the acronym RICE:

- **Rest** by keeping weight off the injured part;
- **Ice** packs for up to 24 hours, 10 to 20 minutes per session;
- **Compression** with an elastic bandage (or taping if appropriate);
- **Elevation** of the injured part above the heart when lying down.

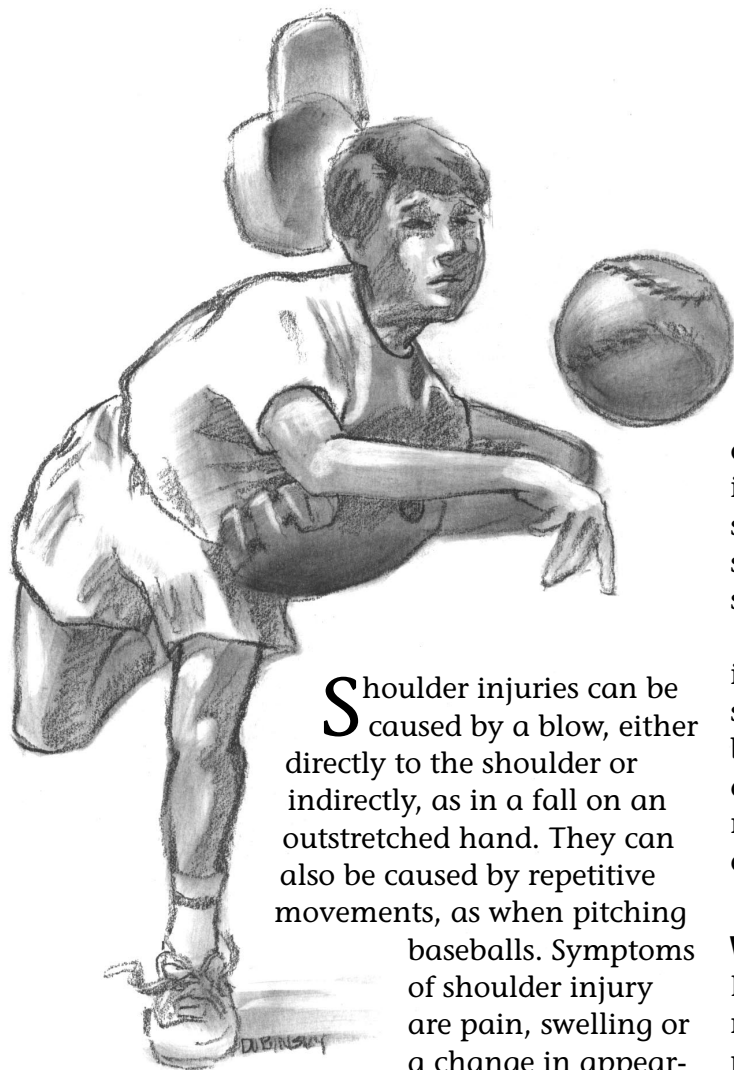
## The Professional Touch

If there is little or no improvement after 24 hours of RICE, visit a healthcare professional, such as a sports medicine specialist. He or she may x-ray the joint to make sure there has been no fracture, assess the severity of the injury and prescribe anti-inflammatory pain medication. In the meantime, a painkiller, such as aspirin or ibuprofen, usually helps relieve symptoms.

With self-care complemented by professional care, you won't be sidelined for long. You may also wish to investigate other forms of exercise that place little pressure on your ankles, such as swimming and other forms of low-impact aerobics.



# Shoulder Injuries



**S**houlder injuries can be caused by a blow, either directly to the shoulder or indirectly, as in a fall on an outstretched hand. They can also be caused by repetitive movements, as when pitching

baseballs. Symptoms of shoulder injury are pain, swelling or a change in appear-

ance of the affected shoulder compared to the other shoulder.

## Types of Shoulder Injuries

The most common shoulder fracture is a fracture of the clavicle, or collarbone, with pain, deformity and tenderness at the point of fracture.

Sprains may occur in three areas of the shoulder:

- at the point where the shoulder joins the

collarbone, often caused by a fall on an outstretched arm;

- at the point where the collarbone joins the sternum, or breastbone;
- at the shoulder joint itself.

Shoulder dislocation is a common athletic injury. The shoulder appears deformed and there is severe pain and inability to rotate or twist the arm. Such an injury requires emergency treatment. Get the person to a health-care professional as soon as possible. A sports injury specialist can determine whether it is safe to reduce or correct the dislocation. The shoulder should also be examined for soft tissue damage.

Shoulder muscle strains and tears may involve the rotator cuff surrounding the shoulder socket or the tendon attaching the biceps to the shoulder. Along with tendinitis and bursitis, these injuries are frequently the result of overuse or repetitive motions, such as excessive throwing or swinging.

## What To Do About Shoulder Injuries

First aid for all shoulder injuries consists of massaging the area of greatest pain with ice packs for a maximum of 20 minutes three to four times a day, immobilizing the shoulder with a sling and getting the injury examined by an orthopedist or other joint specialist. Improperly healed injuries can cause permanent weakness and loss of motion. Always see a medical expert for any injury to the joint for both a physical examination and an x-ray. Avoid injuries by training sensibly, gradually, at the right level for your overall condition and by allowing recovery time from repetitive motions.

# Shin Splints

Shin splints are among the most common injuries of sports enthusiasts, especially those who run, “exercise-walk” or do high-impact aerobics.

The main symptoms of shin splints are pain and tenderness along the lower, inner shins of one or both legs. The leg muscles and the membrane that surrounds the bone and tendons become inflamed.

## Common Causes of Shin Splints

The most common cause of shin splints is simple overuse, especially when a person begins training or increases training. Exercising on hard surfaces and wearing poorly fitted or worn out shoes can also increase the risk of shin splints.

People whose feet “overpronate,” or roll inward at the ankle so that the arch flattens, are also at risk for shin splints. Everyone pronates to some extent, but overpronation places great stress on the calf muscles, which can lead to shin splints and a number of other injuries.

## Your Response to Shin Splints

Pronation can be corrected by wearing exercise shoes designed to guard against it or by using prescribed orthotic devices to support the arch.

The best first treatment for shin splints is applying ice packs to the affected areas two to three times a day for a maximum of 20 minutes each time. After a day or two, heat treatment is also soothing. Taking aspirin and taping the heels and ankles help to alleviate pain as well. However, exercising before the inflammation has subsided may cause the condition to get even worse.

## Shin Splints Are Preventable

Prevent shin splints by observing these tips:

- Follow a training schedule that is right for your level of fitness.
- Run on a soft running surface.
- Do aerobics on a mat.
- Replace shoes that start to get worn.



If you have symptoms of shin splints that don't subside after a couple of days of self-care, see your healthcare provider. You will be examined to make sure you're not suffering from a stress fracture of one of the shin bones, or tibia. With proper attention to shin splints you'll be back on track in no time.

# Low Back Injuries

**L**ow back pain, increasingly common among athletes, should never be ignored. While it may be a sign of weak abdominal muscles or poor posture, it could also indicate such problems as strained muscles, abnormalities of the spine, stress fractures of the vertebrae or disc problems. A physician may diagnose the cause of back pain with a physical exam and diagnostic tests, such as magnetic resonance imaging, or MRI.

## The Road to Recovery

Adequate rest is the first step in recovering from a back injury. A person with a back injury should rest by lying flat on their back with a pillow under their knees or on their side with a pillow between their knees. Ice packs, moist heat or pain medication can be used for pain. Ice or heat should not be used for more than 20 minutes at a time, so it is wise not to sleep with a heating pad. Muscle relaxants are helpful if there are muscle spasms or muscle tension.

The athlete should gradually ease back into training, stopping if pain returns. The best activities are those that avoid extreme twisting of the back or putting the body in a swaybacked position. Many athletes find a back brace speeds recovery and helps ease pain. But a brace should be used only if recommended by a healthcare provider.

## Avoiding Low Back Pain

Guidelines for preventing back injuries include:

- using proper lifting techniques;
- doing regular exercises to strengthen the abdominal, gluteal and quadriceps muscles;
- keeping in good general physical condition.

Some common back strengthening exercises include:

- pelvic tilts, rocking the pelvis forward to stretch the lower back outward;
- crunches, partial situps with the knees bent, for the upper abdominal muscles;
- pressing the lower back into the floor while lying down.



Get professional attention if any back pain lasts longer than two days. Managing back pain can be a lifetime commitment, but following these guidelines should keep your back healthy enough to maintain an active lifestyle and an effective exercise program.

# Aerobic Dance Injuries

**A**erobic dance may be the most popular organized fitness activity, especially among women. Aerobic dance programs provide an enjoyable workout that requires no special skills or equipment. However, many early aerobic dance classes were taught by people with little or no knowledge of exercise physiology. Some of the activities and positions common in aerobic dance programs led to frequent injuries. Studies show that 45 percent of dance program participants experienced injuries.

## What's Behind the Injuries?

Three factors are involved in most aerobic dance injuries. They are:

- improper shoes,
- dancing on a cement or other nonflexible surface,
- dancing more than three times per week.

Most of the injuries reported were injuries to the lower legs.

## A Smart Move

A new trend in aerobic dance is low-impact aerobics, in which one foot is touching the floor at all times. Movement is greater in the upper body and arms, along with leg kicks, side-to-side movements and lunges. A person can thus achieve the same level of fitness through low-impact aerobic dance as through high-impact aerobics, without as much danger of being sidelined by impact injuries. Although low-impact aerobics was developed to prevent such injuries, there is not yet enough evidence for us to know if some forms of low-impact aerobics that include twisting and bending carry their own risks of injury.

## Getting Ready To Dance

If you're taking or considering taking an aerobic dance course, do some homework. Find out what kind of floor is being used. Check the credentials of the teacher. Has he or she had training in sports physiology? Ask a sports shoe expert to recommend proper footwear for aerobic dance. Enjoy the workout, but don't overdo it. "Listen" to your body. Ignoring pain can lead to serious injury. With sufficient preparation and professional advice you'll reap the numerous benefits of aerobic dance—with a low risk of injury.



# Hamstring Injuries

The hamstrings are the muscles in the back of the thigh that bend the knee and rotate and straighten the leg. Strains and tears of the hamstrings are especially common in runners. Hamstring strains cause pain in the back of the thigh, usually during running. There is local tenderness and pain when the athlete tries to stretch. Severe tears may make walking almost impossible.

## Recovering From Hamstring Injuries

Hamstring injuries should be treated with ice packs and a compression bandage. Mild strains respond to gradual stretching and progressive exercise over a period of 10 days to three weeks. Severe tears may require surgery and the use of crutches. Recovery can take up to six months.

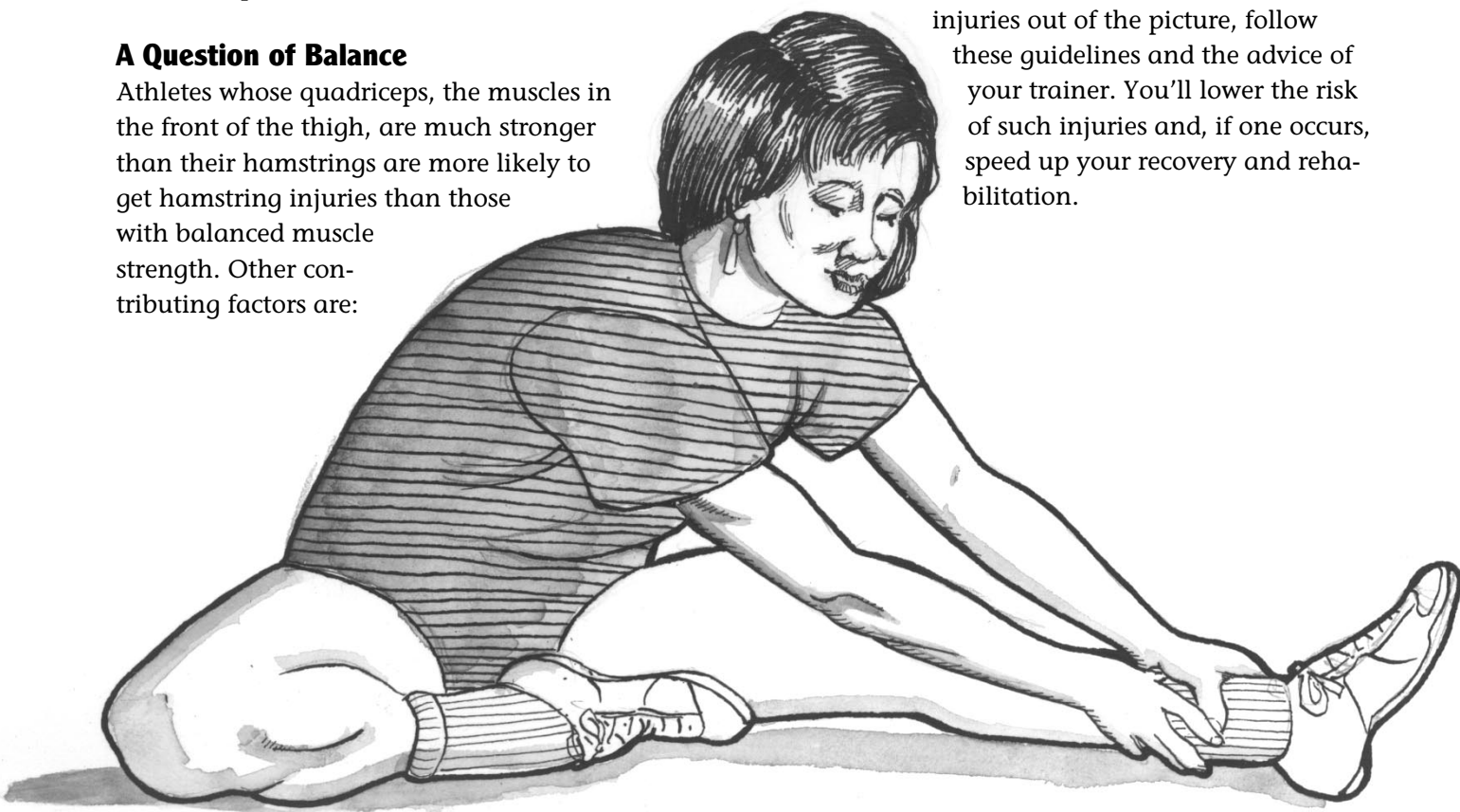
## A Question of Balance

Athletes whose quadriceps, the muscles in the front of the thigh, are much stronger than their hamstrings are more likely to get hamstring injuries than those with balanced muscle strength. Other contributing factors are:

- poor posture,
- poor flexibility,
- poor coordination,
- fatigue.

## Preparation and Prevention

Hamstring injuries are easier to prevent than cure, since they tend to recur. Help prevent hamstring injuries by staying with a balanced conditioning program that is right for your level of fitness and by avoiding overtraining. Exercises should especially balance the strength between the quadriceps and the hamstrings. To put hamstring injuries out of the picture, follow these guidelines and the advice of your trainer. You'll lower the risk of such injuries and, if one occurs, speed up your recovery and rehabilitation.



# Groin Injuries

**G**roin injuries in athletes include strains, hernias and blows to the genitals. Probably the most common groin injuries are strains of the muscles that attach to the lower pelvis. A groin strain is marked by a sharp pain in the groin area, usually while twisting, running or jumping. There is pain, stiffness and weakness in the muscles that lift

**Most groin injuries are preventable when you take the proper precautions...**

the thigh. First aid treatment includes ice packs and rest. Stretching and resistance exercises also help in recovery.

## Hernias Can Be Serious

A hernia occurs when a portion of intestine protrudes through a weak point or a tear in the surrounding abdominal muscle. The most common site for a hernia is in the groin, with pain often radiating into the testicles in men and the lower abdominal/upper-thigh area in women. A bulge can usually be felt when the athlete coughs. Although hernias may produce few symptoms, surgery is recommended to correct them. This is because the protruding portion of intestine can become trapped in the

opening so that its blood supply is cut off, resulting in a medical emergency.

## Blows Below the Belt

Blows to the external male genitalia can be distressing and extremely painful. These injuries can be minimized during sports activities or exercise by wearing proper protection. If such injuries do occur, ice should be applied to keep swelling down while the patient is transported to treatment.

## Training and Preparation

Muscle strains are often a sign of improper training. The principles of safe training include:

- avoiding sudden changes in training,
- warm-up and flexibility exercises before every workout,
- both strength and endurance training,
- wearing properly fitted shoes,
- avoiding hard surfaces when running.

Always wear an athletic supporter and cup when engaged in contact sports or baseball. If you have a hernia, make an appointment with your healthcare provider to evaluate the need for surgery. Most groin injuries are preventable when you take the proper precautions, so play or exercise safely and sensibly.

# Foot Injuries

**F**oot injuries are common in running and other athletic events that involve impact to the feet. Many of these injuries may be caused by a combination of overtraining, improper shoes or foot supports, and foot imbalances, such as pronated feet or rigid high arches. (Pronation is the tendency of the feet to roll inward excessively.)

## Common Running Injuries and Treatments

Runners are particularly prone to the following injuries of the foot or ankle: Achilles' tendinitis, plantar fasciitis or strains of the tendons of the midfoot and forefoot. These injuries are usually treated with ice packs, anti-inflammatory medications and rest, or, in mild cases, decreased training. Proper taping of the foot may also be helpful in some cases.

## Other Foot Problems

Bursitis, blisters and calluses usually occur over bony areas of the foot that press against the shoe. They can often be relieved by changing to shoes that don't press on or rub against the affected area. Blisters can also be avoided by wearing two pairs of socks, by applying moleskin (a type of cotton twill fabric) over blister-prone sites, or by using Vaseline, powders or other coatings designed to prevent blisters. Blisters that have opened should be protected from infection by applying an antiseptic or antibiotic ointment and taping a sterile dressing over the area.

## Stress Fractures

Stress fractures are also common injuries in athletes, especially those who are overtraining. Stress



fractures don't normally require a cast and usually respond to rest and reduced training. Athletes who are recovering from stress fractures or other foot injuries can keep in shape with such low-impact exercises as swimming, cycling and walking.

## Getting to the Bottom of Foot Injuries

Help prevent foot injuries by wearing properly fitted shoes, exercising on soft surfaces and avoiding rapid increases in training. See your healthcare provider to evaluate any persistent foot pain. However, foot injuries are often difficult to diagnose by pain symptoms alone. Some injuries are the result of abnormal foot structures or functions, such as excessive pronation. They can often be corrected by the use of orthotic devices in your shoes. With proper prevention and immediate attention, foot injuries should not keep you sidelined for long.

# Knee Injuries

No joint in the body is as complex or as easily injured as the knee. It is susceptible to ligament injuries, fractures and damage to the inner surfaces of the joint.

## Who Is Most at Risk?

Runners are especially susceptible to knee injuries caused by overuse, resulting in inflammation of the soft tissue of the knee and wear and tear on the inner surfaces of the knee cap, or patella, and other joint parts.

Ligament injuries, such as sprains and tears, are the most common athletic knee injuries. The ligaments are the cords that hold the parts of the knee in place. Sudden twisting or a blow to the knee can cause the ligaments to give way. Overtraining and fatigue make an athlete more susceptible to this kind of injury.

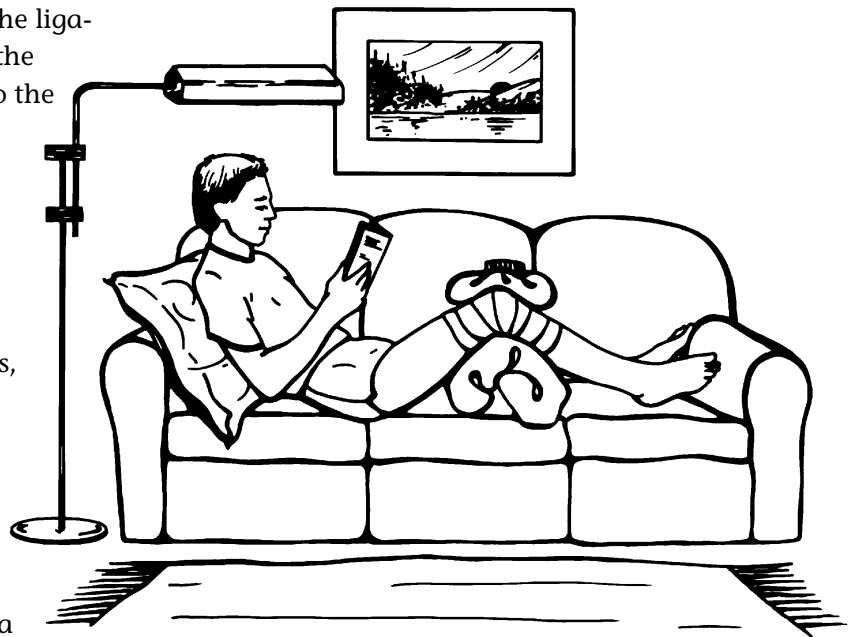
## Urgent Treatment For Knee Injuries

First aid for knee injuries includes ice packs, compression with an elastic bandage and immobilization of the joint. Knee injuries should be examined by an orthopedist. Dislocation of the knee requires emergency treatment, since blood flow to the lower leg is likely to be disrupted. If emergency medical treatment is not available, a certified trainer may attempt to correct the dislocation.

## In the Long Run

Exercising when knees have only partially recovered from injury may result in lifelong knee problems, even if no pain is present immediately. If you have a knee injury, follow your doctor's guidelines for rest time and rehabilitation exercises. Have any

knee pain, stiffness or limited motion checked out thoroughly before continuing your training. To prevent knee and other injuries, wear correctly fitted athletic shoes. It is also important that the shoes match the sport or activity for which they were designed: basketball shoes for basketball, tennis shoes for tennis, etc. Always wear proper protection in contact sports and follow a consistent training program suited to your level of fitness. With such care your knees should last you a lifetime.



# Charley Horses

**A**lmost everyone experiences muscle cramps at some time, but for most people they are only a minor inconvenience.

A cramp is a muscle spasm in which the tissue contracts suddenly, tightly and spontaneously, producing intense pain. A “charley horse” is a kind of cramp which usually occurs in the muscles of the calf during sleep or while exercising or engaging in sports. It can also occur in a thigh or arm.

## The Causes and Cures of Cramps

Muscle cramps can be caused by many things, including:

- low levels of potassium, magnesium or calcium;
- dehydration;
- overfatigue;
- a lack of oxygen to a muscle;
- poor circulation;
- the overuse of a cramping muscle.

When a cramp occurs, it's best to extend the affected limb while gently massaging the area of pain. Immersing it in warm water or applying a heating pad may also provide relief.

## Preventing Charley Horses

In order to avoid muscle spasms and charley horses, take the following steps:

- Drink plenty of fluids to prevent dehydration.
- Keep limber with a regular program of stretching exercises.
- Stretch immediately before and especially after a workout.
- Don't overfatigue muscles by exercising them to the point of complete exhaustion.

**When a cramp occurs  
it's best to extend the affected  
limb while gently massaging  
the area of pain.**

Cramps and charley horses are avoidable and treatable, so you don't have to give up your workout routine because of the occasional muscle spasm. Your body is simply telling you to 'Wait a minute—warm up first!' or 'Don't overdo it!' Listen to your body and you'll enjoy your fitness program without interruption.

# Tendinitis

The more people overdo it when exercising, the more they might develop a physical ailment that has been around since human beings learned how to throw things: tendinitis. The primary symptom of tendinitis is a soreness in a joint, most commonly the shoulder or elbow. This pain is usually caused by a small tear or inflammation of a tendon that attaches the muscles to the bones, or an inflammation of the sheath surrounding the tendon.

## Causes of Tendinitis

The pain or tenderness can arise from either a minor injury or from excessive use. When tendinitis occurs in the elbow it is often referred to as “tennis elbow,” though any repetitive and stressful motion can bring on the injury. If left untreated, the stiffness and occasional pain of tendinitis can become permanent, due to a scarring of the tissues. In severe cases, the ligaments and tendons around the shoulder can stiffen to the point of loss of movement, a condition called frozen shoulder.

## How To Treat Tendinitis

Anyone suffering from tendinitis should not use the affected area for several days. To help reduce swelling, control pain, rest the muscles and prevent stiffness, follow these additional measures:



- Wrap the affected area with an elastic bandage.
- Apply an ice pack periodically for the first 24 hours, taking care not to freeze the skin.
- Keep the arm in a sling when standing.
- When lying down, elevate the area at or above the level of your heart.
- Take aspirin or ibuprofen as needed.



After a few days of rest, it's usually okay to follow a routine of gentle range-of-motion exercises and stretches.

## If All Else Fails

If your tendinitis doesn't improve with these measures, see a healthcare professional, particularly a sports medicine specialist, for an examination and additional treatment. There's no need to let tendinitis cramp your style.

# Athlete's Foot

**M**any people develop athlete's foot at one time or other. Athlete's foot is a fungal infection that thrives on warm, moist skin. Because sweating and frequent showers are part of athletics, the infection is common in athletes. Hence the name athlete's foot. In spite of its name, an outbreak of athlete's foot is not limited to the feet. The same fungus can be found on the head, fingers, legs and groin, where it is sometimes called "jock itch."

## The Source and Signs of Athlete's Foot

The fungus is most often spread to the feet by direct contact with contaminated floors in locker rooms, showers and bathrooms. Its most common symptom is itching, but in severe cases on the feet, cracks open up between the toes or pimple-like bumps develop and leak a clear fluid. The infected area may burn and sting. If not treated, athlete's foot may be complicated by a secondary bacterial infection, which can cause more discomfort as well as a foul odor.

On other parts of the body, athlete's foot may appear as dry, scaly skin that may also be red.

## Cures and Precautions

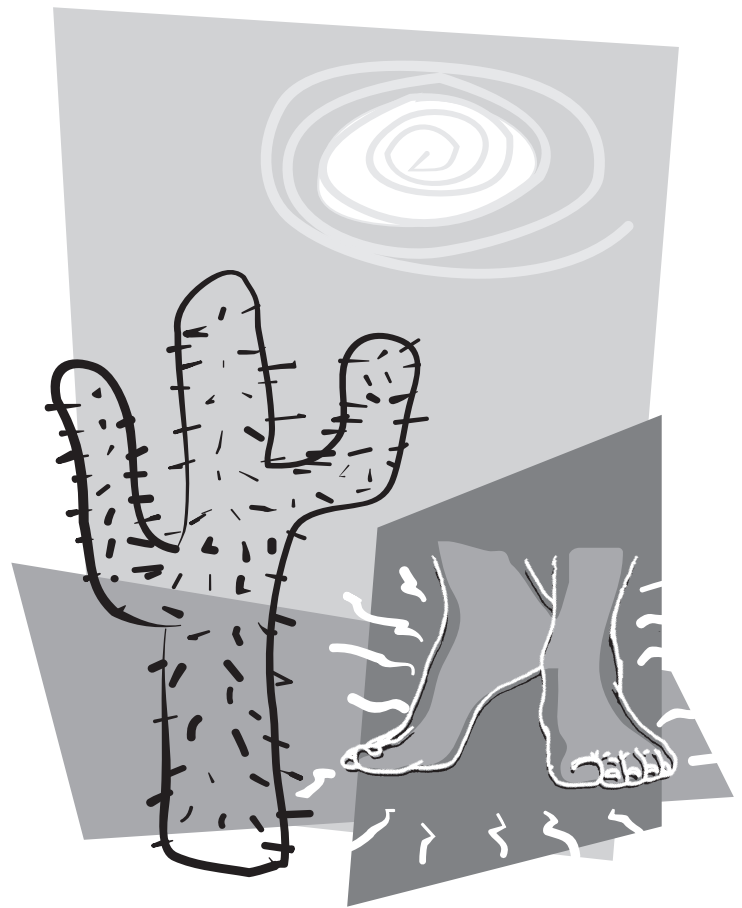
Athlete's foot can be successfully treated with many over-the-counter antifungal powders or creams. However, because scratching can lead to a secondary infection, a person with a case of athlete's foot should avoid scratching the infected area.

The best prevention for athlete's foot is keeping the feet as dry as possible. Individuals should use clean, dry, light-colored and absorbent socks; well-ventilated shoes; and a dusting of powder, which helps absorb excess moisture.

## Don't Give Up

If your usual remedy for athlete's foot doesn't clear it up, check with your pharmacist for other nonpre-

scription remedies. However, for really stubborn cases, check with a podiatrist, who may prescribe a more powerful fungicide. Prescribed medications should clear up the infection within 10 days but should continue to be used for the prescribed period to prevent a recurrence. With so much ammunition against athlete's foot there's no need for the infection to interfere with your sport or workout.



# Running Injuries

Running has become one of the most popular forms of exercise, with over 12 million of us hitting the road on foot each day. But running is a demanding sport, and each year over 35 percent of regular runners develop injuries serious enough to reduce the amount of time they run each week.

## Possible Running Problems

The majority of running injuries affect the knee and foot areas. They're most often caused by overuse, running too hard too soon or increasing training too fast. Beginning runners and those who run more than 50 miles a week are most at risk.

Some common runners' injuries include:

- runner's knee.
- Achilles' tendinitis.
- shin splints.
- muscle strains in the lower legs and the hamstring muscles at the back of the thigh.
- muscle cramps.
- injuries to the foot.
- stress fractures in the lower leg and foot.

## Treatment and Prevention

The first treatment for soft tissue injuries caused by running is known by the acronym RICE:

- **Rest:** Avoid activity until the affected area is healed and then return to activity gradually.
- **Ice:** Put an ice pack on the affected area for about 20 minutes, three or four times a day, taking care not to freeze the skin.
- **Compression:** Use an elastic bandage around the affected area, taking care not to cut off circulation.
- **Elevation:** Keep the injured area above the heart. When lying down, for instance, an injured leg can rest on pillows.

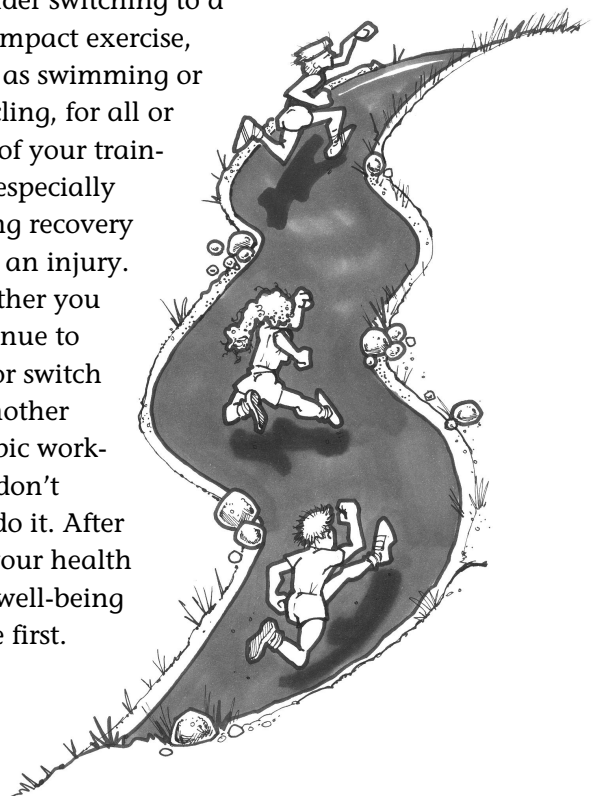
Runners can reduce their chances of being injured by:

- wearing properly fitted shoes that correct for problems such as pronation (a tendency of the feet to roll inward excessively) and flat feet.
- avoiding running on hard surfaces, such as concrete sidewalks.
- getting plenty of fluids and proper nutrition to avoid muscle cramps.
- limiting their training to no more than a 10 percent increase in any one week.
- warming up by stretching and walking before running, and cooling down by stretching afterward.

## Keeping Your Health First

See your healthcare provider for any persistent or severe pain related to running. Ignoring injuries can lead to more serious and even permanent damage. If you frequently experience running injuries, consider switching to a low-impact exercise, such as swimming or bicycling, for all or part of your training, especially during recovery from an injury.

Whether you continue to run or switch to another aerobic workout, don't overdo it. After all, your health and well-being come first.



# Walking Injuries

In many ways, walking is an ideal form of exercise. It requires no special equipment or knowledge and can be done almost anywhere. Injuries are rare in walkers who train at a reasonable pace and wear well-fitted walking shoes.

## Types of Walking Injuries

Walking at a casual pace usually presents no problems, but race-walking or “exercise-walking” to increase the aerobic benefit may increase the risk of injury. Injuries that walkers might experience include:

- shin splints, with pain in the muscles of the lower leg;
- muscle cramps, or charley horses;
- Achilles tendinitis, with pain especially in the ankle and back of the lower leg;
- foot injuries, such as a bruised heel or blisters.

## The Best Treatment

Most soft tissue injuries respond to the treatment known by the acronym RICE:

- **Rest:** Avoid activity until the affected area is healed and then return to activity gradually.
- **Ice:** Put an ice pack on the affected area for about 20 minutes three or four times a day, taking care not to freeze the skin.
- **Compression:** Use an elastic bandage around the affected area or tape around a foot, taking care not to cut off circulation.
- **Elevation:** Keep the injured area above the heart. When lying down, for instance, an injured leg can rest on pillows.

A muscle cramp can be massaged and soaked in warm water until it relaxes. Persistent foot injuries may require more aggressive treatment, including anti-inflammatory medications, steroid injections or surgery.

## Prevention of Walking Injuries

To prevent walking injuries, follow these guidelines:

- When warming up and cooling down, be sure to stretch out calf muscles, quadriceps and hamstring muscles.
- Warm up gradually to a brisk walking pace.
- Avoid sudden increases in distance and walking speed.
- Wear walking shoes with thick soles and cushioned insoles.
- Walk on soft, smooth surfaces whenever possible.
- Wear two pairs of socks if blisters are a problem.

## Pain-Free Walking

See your healthcare provider for any persistent pain. Ask for an evaluation of any special problems you have, such as pronation (a tendency of the feet to roll inward excessively) or unusually high or low arches, that may require specially designed shoes or shoe inserts. For many, walking is one of the most satisfying activities of the day. There is no reason why walking should ever be painful.



# Nutrition Basics

## Exercise Basics

## Getting & Keeping Fit

## Cooking & Eating Right

The Basics of a Balanced Diet	Fat Makes You Fat
Good Eating Guide	Fiber in the Diet
The Food Pyramid	Nutrition for the Later Years
Reading Food Labels	What Is Obesity?
How Many Calories Do You Need?	Overweight or Overfat?
How You Think Is How You Eat	Diet, Exercise and Losing Weight
Know Your Nutrients	Why Diets Don't Work
Nutrition at the Supermarket	Safe Weight Loss
Nutrition Fads and Foibles	Teaching Your Body To "Burn" More Calories
Understanding Daily Values	Fiber and Weight Loss
Changing Your Relationship to Food	Hazardous Weight Loss
Dealing With Feelings	Fasting and Liquid Diets
Mealtimes	Overcoming Backsliding
Diet and Cancer Risk	The Overweight Child
Diet for a Healthy Mouth	Overcoming Binge Eating
Facts About Fats	

# The Basics Of a Balanced Diet

These days, it can be confusing to plan a balanced diet. For instance, how much protein should a person eat at each meal to stay healthy? The most sensible way for people to approach a healthy diet is to know how much of their daily calories should come from fats, protein and complex carbohydrates and to follow a few simple eating guidelines.



## Calorie Sources

Every day, a person takes in a certain amount of calories from a variety of foods. For a healthy diet, most of these calories—say 60 percent to 70 percent—should come from complex carbohydrates, such as whole grains, breads, pastas, fruits and vegetables. Protein, in the form of lean meats, poultry, fish and dried peas or beans, should make up 10 percent to 20 percent of calories. Finally, calories from fats should be limited. Less than 20 percent is ideal, but definitely not more than 30 percent. These proportions help provide all the energy a person needs during the day, while keeping fat, sugar and protein intake within recommended guidelines.

## Balance Means Variety and Moderation








The next step in creating a balanced diet is to plan each meal with these basic health tips in mind:

- Eat a variety of different foods, including breads, fruits, vegetables, dairy products and a range of protein sources.
- Limit servings of meat, poultry and fish to three ounces after cooking.
- Avoid highly processed or refined foods whenever possible.
- Limit the intake of fats, cholesterol, salt and sugars.
- When drinking alcoholic beverages, do so in moderation.

The extra attention required to maintain a balanced diet may seem a little difficult at first, but the effort will soon pay off in higher energy, lower stress and a greater resistance to disease.

# Good Eating Guide

With so much health advice going around these days, it's sometimes hard to figure out which foods to choose for a proper diet. However, the U.S. government provides some basic guidelines that can help. People can maintain a healthy diet on a regular basis by following these tips for good eating:

-  To get all the vitamins, minerals and other nutrients necessary, be sure to eat a variety of different foods. Meals should be well-balanced, including fruits and vegetables, whole grains, breads and cereals, and a variety of protein sources, such as poultry, fish, lean meats, beans and peas.
-  Healthy eating works best when a person maintains a healthy weight. If a weight-loss diet is necessary, choose a moderate plan that aims to improve eating habits.
-  When selecting foods, stay away from items that are high in fat and avoid saturated fats, butter, lard, hydrogenated shortenings and tropical oils.
-  Try to be creative when seasoning foods, using herbs or other flavorings instead of salt. Avoid salty snack foods and processed food products that are high in sodium.
-  Make sure that daily meals include plenty of fruits, vegetables and whole grains, which provide energy, contribute to overall health and help prevent disease.
-  Avoid too much sugar. When a sweet is desired, choose whole fruit, carrot sticks, yogurt or lowfat breads and crackers instead of sugary snacks.
-  When drinking alcoholic beverages, do so in moderation.

## Rely on the Tried and True

Basic dietary guidelines are always useful, no matter what new health fad is being discussed on TV or in the newspapers. The best approach is to use common sense, shop wisely and keep dietary guidelines in mind when preparing meals.

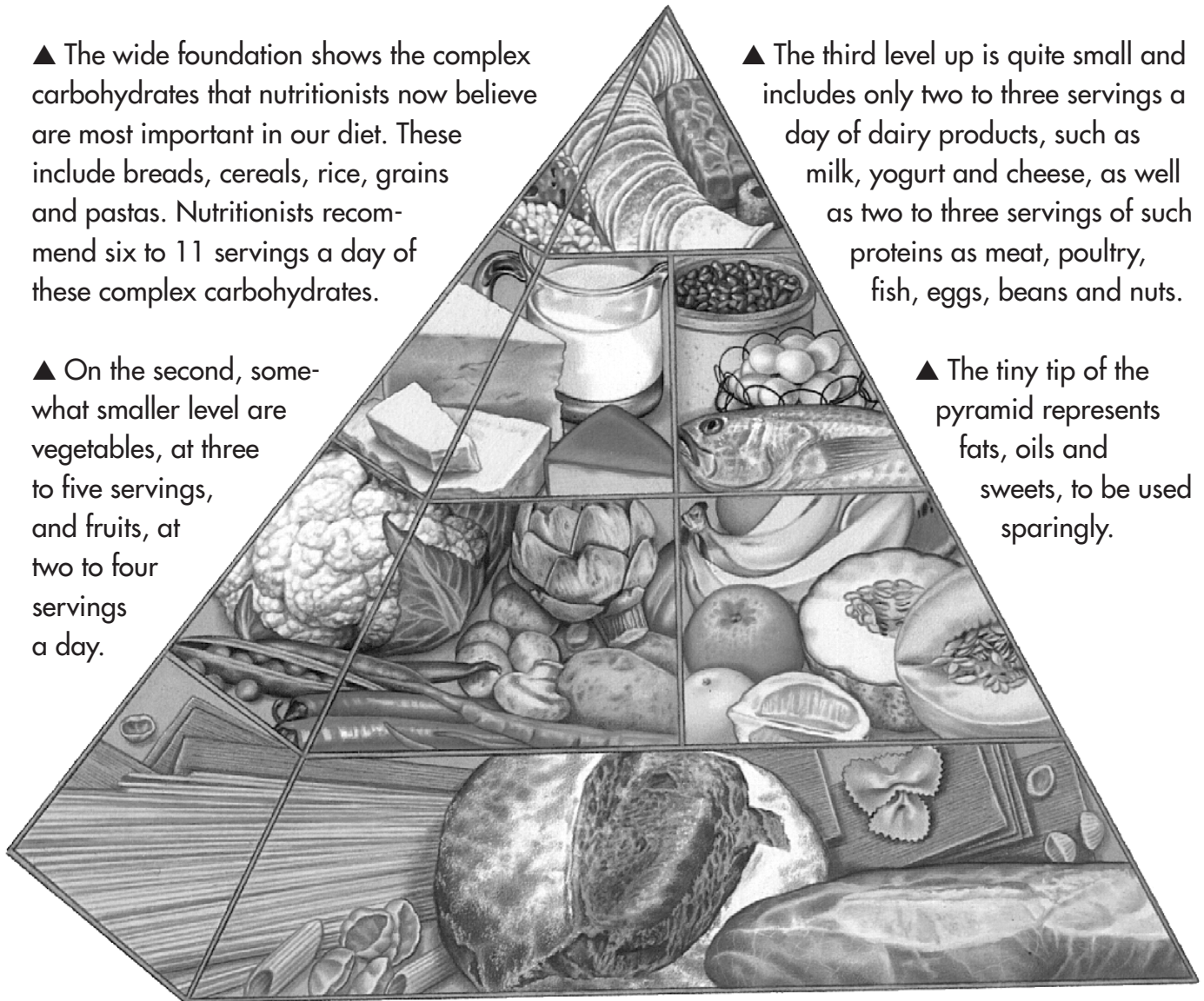
Many nutritionists are picturing the old four basic food groups in a different way. Because of its shape, it's called the "food pyramid." The pyramid is divided by lines into four levels, like stories in a building:

▲ The wide foundation shows the complex carbohydrates that nutritionists now believe are most important in our diet. These include breads, cereals, rice, grains and pastas. Nutritionists recommend six to 11 servings a day of these complex carbohydrates.

▲ On the second, somewhat smaller level are vegetables, at three to five servings, and fruits, at two to four servings a day.

▲ The third level up is quite small and includes only two to three servings a day of dairy products, such as milk, yogurt and cheese, as well as two to three servings of such proteins as meat, poultry, fish, eggs, beans and nuts.

▲ The tiny tip of the pyramid represents fats, oils and sweets, to be used sparingly.



### Healthy Nutrition Is Easy To See

What does the food pyramid tell us about the healthy way of looking at nutrition? Simply put, complex carbohydrates, fruits and vegetables should form the large base of our diet, while proteins and dairy products are needed by the body in smaller amounts than once believed. Fats and oils should play a very small part of a healthy diet.

In a healthy diet, where calories come from is important. So plan meals that fit the shape of the food pyramid: big on complex carbohydrates, small on fats and sweets.

# The Food Pyramid

# Reading Food Labels

One of the most important guidelines for wise food shopping is to read food labels carefully. Most food labels provide a list of ingredients, and many also give additional information about the nutritional value of the contents. The items listed often include:

- ✓ **calories.**
- ✓ **fat.**
- ✓ **cholesterol.**
- ✓ **sodium.**
- ✓ **protein.**
- ✓ **vitamins and minerals.**

## INGREDIENTS

When looking at any list of ingredients, remember that ingredients are in order of their relative weight. The first ingredient is the one that makes up the greatest part of the product. The last ingredient on the list represents the smallest part of the product, and the others represent amounts in between.

## NUTRITION FACTS

Food labels provide nutritional information for a typical single serving rather than for the entire package or can, unless, of course, that makes up one serving. The serving size is an important measurement, since not all people eat the same amount of food at a single sitting. Try to gauge how close the serving size is to your own eating habits in order to calculate how many nutrients you'll be receiving at each meal.

Food labels also show the amount of certain nutrients per serving along with the "% Daily Value" (DV). The DV is based on a 2,000-calorie diet and is the percentage of each nutrient believed to meet the needs of the average person each day. For example, if a certain food provides 50 percent of the DV for Vitamin C, one serving gives a person half the Vitamin C needed per day.

## A LITTLE READING YIELDS BIG BENEFITS

The little bit of time that a person spends reading labels at the supermarket can yield tremendous health benefits. Compare brand names to find the highest nutritional value at a reasonable cost. If a favorite food doesn't have nutritional information on the label, write to the manufacturer and ask for a list of nutrients. Finally, don't forget to read the lists of nutrients that may be posted near fresh, unprocessed foods, such as in the butcher and produce sections of many supermarkets. You'll soon become an expert in filling your nutritional needs.

### DIET OLÉ CHICKEN ENCHILADA DINNER

#### Nutrition Facts

Serving Size 12 oz. (340g)

Servings Per Container 1

#### Amount Per Serving

**Calories** 340

Calories from Fat 45

#### % Daily Value\*

**Total Fat** 5g

**8%**

Saturated Fat 2g

**10%**

**Cholesterol** 30mg

**10%**

**Sodium** 470mg

**20%**

**Total Carbohydrate** 61g

**20%**

Dietary Fiber 5g

**20%**

Sugars 2g

**Protein** 14g

Vitamin A 10%

Vitamin C 35%

Calcium 15%

Iron 10%

\* Percent Daily Values are based on a 2,000-calorie diet.

Your daily values may be higher or lower depending on your calorie needs:

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Calories per gram:

Fat 9 • Carbohydrate 4 • Protein 4

# How Many Calories Do You Need?

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A rough but simple rule of thumb allows us to determine the approximate number of calories the average person needs to consume each day:

- First, determine your ideal weight. If you're a woman, give yourself 100 pounds for the first five feet of height, plus five pounds for each additional inch. Thus, the ideal weight of a woman who is five feet seven inches tall is about 135 pounds.  
For a man, begin with 110 pounds for the first five feet and add five pounds per inch. Thus, a man five feet 11 inches tall should weigh about 165 pounds.
- Next, to figure your daily calorie requirement, multiply your ideal weight by 15. This figure is for a relatively sedentary adult of either sex. More active adults need to multiply their ideal weight by 20. For active adolescents, multiply by 30. For example, a man with a desk job, whose ideal weight is 170 pounds, should consume about 2,550 calories a day to stay healthy and maintain his weight. A woman who is only five feet tall but active would require about 2,000 calories a day, or even more if she is an athlete or a nursing mother.

## **YOU MAY BE AN EXCEPTION**

Because there are always exceptions to any rule, people whose metabolic fires burn hot may need to consume many more calories than this to maintain their normal weight. Likewise, people who gain weight easily may have to monitor their diets more carefully.

Remember that you eat food, not just calories. Aim for a lowfat, highly nutritious and varied diet that emphasizes whole grains, vegetables and fruits and includes moderate portions of meat and dairy products.

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# Is How You Eat

# How You Think

Your beliefs, lifestyles and ways of thinking affect how you think about food. For example, some people have a rigid style of thinking. They like to run their lives by strict and clear rules. These rules may include always cleaning their plates or finishing everything there is to eat at a meal. Similar to these people are those with an exaggerated sense of control. These people would prefer to lose weight by fasting until the weight is gone. That way they're in complete control of what they eat. But the truth is, we're never completely in control of our lives. We have to adapt to changes around us.

## **OUT OF CONTROL**

Some people may feel they have no control at all. They may feel defeated from the start at the thought of changing their eating behavior. They may expect failure, and they often get what they expect. They may feel they're doomed to fail by their genetic background or by their spouse's eating habits or because they think they have too many fat cells.

## **MANAGING YOUR ATTITUDE**

Lucky are those who think of the tasks they begin as an opportunity to succeed and to learn. They're open to the changes they must make to manage their eating behavior.

What's your thinking style? Is it helping you reach your weight-management goals? If it is, you're in luck. If not, what attitudes can you work on to change? Talking about your attitudes with others can be a way to recognize and understand them better. Getting into a weight-management program that encourages you to change your behavior may be another way to address attitudes about food and eating. Check the phone book for Overeaters Anonymous (in the white pages) or Weight Control Services (in the yellow pages) or ask your healthcare provider or a registered dietitian to refer you to a reputable program.

# Know Your Nutrients



These days, people are paying more attention to nutrition. So it's important to realize that even though some nutrients, such as fat, must be taken in moderation, all nutrients must be consumed to maintain good health.

Nutrients can be divided into six categories:

- carbohydrates,
- protein,
- fats,
- vitamins,
- minerals,
- water.

## Why Nutrients Are Essential

☉ The body needs **carbohydrates** for energy, but only a limited amount can be used at any given time. The remainder is stored for later use. Carbohydrates come in two forms: simple and complex. Simple carbohydrates are commonly known as sugars, while complex carbohydrates include all the starches, such as those found in grains, cereals, breads and starchy

vegetables like potatoes, corn, peas and beans.

☉ **Fats**, like carbohydrates, are used by the body for fuel and are essential for the absorption of certain vitamins. Although some fat in the diet is necessary, too much fat can lead to heart disease, obesity and other health problems.

☉ The body relies on **protein** for the proper development and maintenance of muscles and tissues. Most people get plenty of protein and, in fact, may eat too much. Too much dietary protein may lead to kidney and liver problems or other harmful medical conditions.

☉ The body needs **vitamins** and **minerals** for a variety of essential biological functions. But some vitamins can be toxic if taken in excess. People who follow the U.S. government's Percentage of Daily Values (or DVs) for vitamins and minerals will get enough of these important nutrients.

☉ Many people don't realize it, but the body's need for **water** is second only to its need for oxygen. That's because water is the basis of all the body's fluids. Lack of water can lead to serious illness or even death.

## Getting the Nutrients You Need

People can get all the nutrients they need by eating a diet that's rich in complex carbohydrates, with moderate amounts of protein and some fat and, of course, plenty of water. Eating five servings of fruits and vegetables a day also ensures adequate amounts of antioxidants (vitamins A, C and E), which may help prevent cancer, and fiber (most forms of which are carbohydrates) to help prevent constipation and possibly colon cancer.

Most people do not need supplements of nutrients, such as vitamins and minerals, unless recommended by their health care provider. Simply eat a balanced diet every day and keep nutrients in mind when you go shopping.

# Nutrition at the Supermarket

Good nutrition begins with the choices we make at the supermarket.

Nutrition-conscious shoppers follow a few simple strategies to make sure they bring home healthful foods.



## Preparing to Shop

Smart shoppers arrive at the store well fed, to avoid buying junk food out of hunger. They begin by shopping around the perimeter, or outer aisles, of the store, where the fresh produce and dairy products are usually located. With a full cart, they're also more likely to skip the processed and packaged foods in the inner aisles. Because they stick to a shopping list, they're less tempted by "bargains" that don't really fit their needs.

## Shopping Tips for Good Nutrition

Smart shoppers also check food labels, skipping products with many "empty calories" in the ingredients, such as foods high in fats and refined sugars. Ingredients to watch out for include:

- tropical oils, such as palm oil and coconut oil, as the first or second ingredient.
- sugar, whether in the form of corn syrup, fructose, honey, molasses or any other form, as the first or second ingredient.

- fat content, shown in calories from fat (per serving) and in grams. If calories from fat are not apparent, figure them at nine calories per gram of fat. That sum should add up to less than 30 percent of the total calories per serving.

Further shopping tips for sound nutrition include:

- avoiding heavily processed or instant foods and packaged mixes.
- choosing whole-grain breads and pastas.
- checking expiration dates on perishable foods, such as dairy products.
- passing up wilted vegetables and bruised fruits, as well as prepackaged produce that can't be inspected individually.
- shopping for fresh produce twice a week, so that nutrients are not lost during a long storage period.

Good nutrition at the supermarket is not really complicated. Once you know the basics, it becomes second nature to look at food from a nutritional standpoint.



# Nutrition Fads and Foibles

Every day, new products and diets appear, most of them promising either increased energy, relief from a newly invented “illness” or quick weight loss. Authors of nutrition books are celebrated on TV talk shows, while products

**When oat bran was found to play a role in limiting cholesterol, manufacturers rushed in with extravagant claims...**

and “systems” are offered at inflated prices.

Some recent food fads and foibles include megadoses of vitamins, the theory

that sugar causes hyperactivity, food allergy theories and special “magic” substances that promote energy and weight loss.

## Exaggerating a Valid Claim

Sometimes a valid nutritional idea becomes a fad and is overdone. When oat bran was found to play a role in limiting cholesterol, manufacturers rushed in with extravagant claims for their oat bran products, many of which contained levels of fat and sugar inconsistent with total nutritional value.

## How to Decide

To separate the valuable from the fraudulent or just plain worthless, ask a few questions:

- Is this product or treatment being promoted by someone who has something to gain from it, such as the sales of books, special foods or supplements that can't be supplied by anyone else?
- Are nutritional claims backed up by research in reputable medical journals, or are they supported by a trained nutritionist or a registered dietitian?
- Does the treatment or “special diet” require eating a large amount of certain nutrients or restricting the diet to only certain foods?

## Too Good to Be True?

There's no easy way to boost your energy and well-being or to lose weight. Food fads that seem too good to be true probably are. A basic rule of good nutrition is to eat a variety of healthy foods from all the food groups, avoiding high-fat and sugary foods. Before swallowing the claims—or the products—of talk show guests, ask yourself the questions above. Nutrition fads may have some elements of truth, but can rarely support a safe, effective and complete weight-loss or nutrition program.

**There's no easy way to boost your energy or to lose weight. Food fads that seem too good to be true probably are.**

# Understanding DAILY VALUES

**M**ost food labels now show a guide to help consumers plan a healthy overall diet. It's called the "Percentage of Daily Value," or DV. DVs act as reference points to help people see what their overall daily dietary needs should be. Reading and understanding these percentages can be a valuable tool in your food choices.

## HOW ARE DAILY VALUES FIGURED?

For labelling purposes, 2,000 calories has been established as the reference point, the average daily energy intake for most people. Different amounts of the following nutrients should contribute to these daily calories: total fat, saturated fat, cholesterol, sodium, total carbohydrates and dietary fiber. For instance, the total amount of fat recommended in a day on a 2,000-calorie diet is less than 65 grams, while the amount of dietary fiber is 25 grams. The DV takes the amount per *serving* listed for each nutrient and divides that figure by the total recommended daily amount. Thus, if the total fat in a serving is 5 grams, 5 divided by 65 equals 8 percent (rounded off). Likewise, if the dietary fiber is 5 grams, 5 divided by 25 equals 20 percent. Therefore, this product provides 20 percent, or one-fifth, of the dietary fiber the average person should eat in one day. The DVs for any vitamins or minerals are listed as well.

## PUTTING DVs TO USE

It's a good idea to know the nutrient content of your diet. Certain links exist between nutrients and health status, such as:

- Eating too much fat or cholesterol has been linked to an increased risk of heart disease.
- Most weight-loss programs recommend a specific limit to the amount of fat a participant should eat each day.
- Increased fiber in the diet may decrease the risk of colon cancer.
- Too much sodium can heighten the risk of high blood pressure in some people.

A doctor or dietitian may tell you what nutrients you should limit and which ones to get more of. The DV on labels or posted in the produce section and butcher section of many markets specifies exactly how much of a nutrient a typical serving of a food contains. If your body type, lifestyle, age, gender or pregnancy or nursing status differ from the 2,000-calorie-a-day standard, you should allow for that, varying your intake to suit your needs. Thus, with DVs taking the guesswork out of planning your diet, you can concentrate on preparing nutritious, delicious meals for yourself and your family.

*Understanding  
Daily Value  
labels can take  
the guesswork  
out of planning  
your diet.*



**F**or most people, food means many things besides simple nutrition. How we relate to food can help or hinder our efforts to achieve good health and reasonable body weight.

People can learn a great deal about their relationships to food by keeping a daily food diary or by simply thinking about their motives every time they eat. A pattern of eating to relieve boredom, guilt or tension or to please others may emerge. For some, food has always been a reward for good behavior. Others eat when they need to feel comforted.

### Breaking the Pattern

Once the pattern is recognized, it can be broken. One

way is to change some food-related activities. This may involve setting a different time for eating and sticking to the new time; eating only at designated areas, such as the dinner table; or learning to read food labels and buy foods for their nutritional value rather than for their comfort value. Another way to change eating patterns is to look at the underlying cause of inappropriate food cravings.

### There's More to Life Than Food

If food is on your mind much of the time, this is a clue that your relationship to food may go beyond the need for nourishment. Once you've identified

the source of your food cravings, make a list of things you can do instead of eating. Tense? Learn relaxation techniques. Bored? Expand your horizons by taking a class, getting some good books at the library or doing some volunteer work. Each time food cravings arise, remind yourself that food is to maintain your body's health, not to solve other problems in your life. If you find it difficult to change your relationship to food on your own, look in the phone book for a reputable weight-control program or consider getting involved in a support group, such as Overeaters Anonymous. You can work with them to analyze and overcome food-related problems one by one.

# Changing Your Relationship to Food



# With Feelings

Few of us eat simply to avoid starvation. From our earliest memories, food is connected with our feelings of being loved and nurtured. It's not surprising that most of us, from time to time, turn to food when we need to feel loved or to give love.

Family eating patterns often reinforce the connection between food and love. Parents may use food to reward good behavior or to soothe anger or disappointment. Young children are made to feel "good" if they eat all the food on their plate. Older children often continue to feel they must eat whatever they're given by their parents—or anyone else who offers them food.

## Feelings May Spur the Urge to Eat

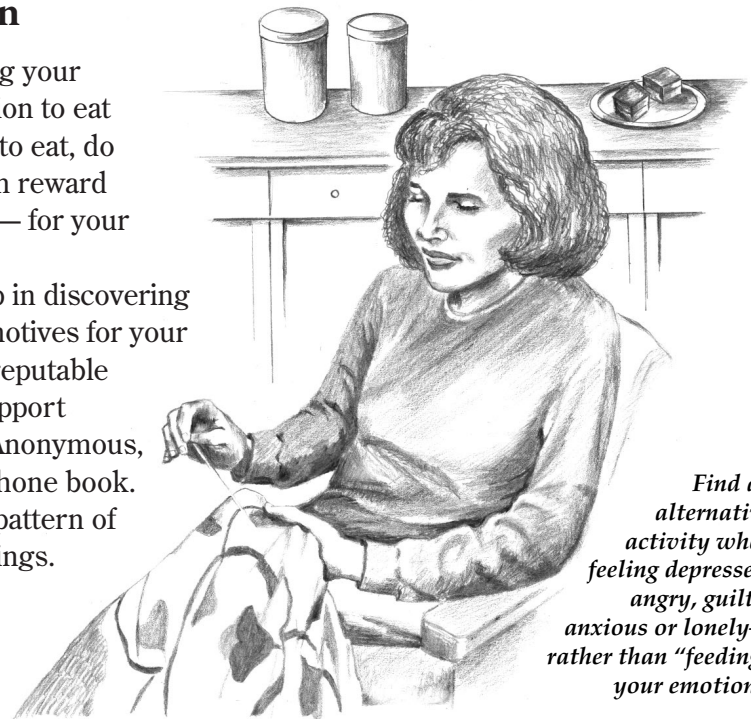
Because food symbolizes love, many people eat to feel better when they're feeling depressed, angry, guilty, anxious or lonely. In order to deal with feelings, you first have to recognize them. When you feel like eating, notice your mood. Are you angry? Anxious? Before you eat, take a moment to write down exactly how you're feeling. Is there something causing the feeling? What can you do about it? Make a list of alternatives to eating that might help you cope with the feeling. These might include:

- taking a walk or other exercise.
- doing some meditation, relaxation or stretching.
- talking about the emotion with your spouse or a close friend.
- doing something you really want to do, even if you feel you don't deserve it.
- resolving the problem that's causing the feeling.

## Breaking the Pattern

When you've finished writing your list, make a conscious decision to eat or not eat. If you decide not to eat, do something on your list. Then reward yourself—but not with food—for your actions.

If you need additional help in discovering the possibly inappropriate motives for your appetite, consider calling a reputable weight-loss program or a support group, such as Overeaters Anonymous, which you may find in the phone book. Take action now to break a pattern of eating because of "bad" feelings.



*Find an alternative activity when feeling depressed, angry, guilty, anxious or lonely—rather than “feeding” your emotions.*



# Mealtimes

Much has been written about what to eat to provide a healthy, nutritious diet and stay slim. But *how* we eat can have as much effect on our diets as *what* we prepare to eat. Those who allow themselves the pleasure of a leisurely, attractive meal may gain as much satisfaction as others get from overeating.

## A More Fulfilling Experience

Techniques that focus on the satisfaction of the meal, rather than the food, include:

- ✿ using attractive, elegant place settings, perhaps with candlelight and a tablecloth.
- ✿ eating in one place set aside for meals—preferably the dining room or kitchen table—and staying there throughout the meal.
- ✿ using smaller dinner plates.
- ✿ keeping serving dishes or containers with leftovers off the table.
- ✿ avoiding other activities, such as watching TV or reading, while eating.
- ✿ eating more slowly by putting the fork down between bites, using chopsticks or sipping water between mouthfuls and courses. It takes 20 minutes for the brain to tell the stomach it's full.

Begin the meal or precede it with an appetizer of raw vegetables served plain or with a low-calorie dip, such as an herbed yogurt. This takes the edge off hunger without providing too many calories.

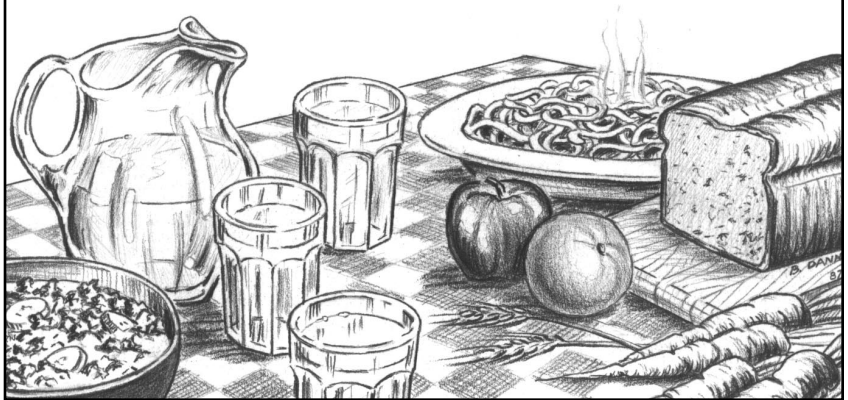
## Celebrate the Experience Rather Than the Food

Too often our only pleasure in eating is focused on the food itself. Small wonder we eat too much. Try making your next meal into a celebration—even if you're eating alone. Use your favorite place settings and plan to spend at least half an hour at the table. Postpone family disputes or stressful topics until some other time. When cleaning up, avoid further nibbling. Wrap leftovers immediately or throw them away.

It's true that a satisfying meal takes more time, but it's quality time that you deserve. Just as serving tea can take the form of a prolonged but beautiful Japanese tea ceremony, your basic need for food can be transformed into a period of reflection and renewal. Explore the possibilities.

# *Diet and Cancer Risk*

**W**hile there is no evidence that any single food or lifestyle change can prevent cancer altogether, some experts believe we can reduce the risk of cancer by as much as 35 percent if we make an educated effort to improve our diets. These changes include:



- less total fat, especially saturated fats, which are found primarily in animal products;
- more fiber in the diet;
- more fresh fruits;
- vegetables, especially yellow squash, carrots and leafy greens, which are high in beta carotene and vitamin C, and vegetables from the cabbage family, including broccoli, brussels sprouts and cauliflower;
- fewer highly salted foods or foods prepared with salt, such as pickles and olives;
- fewer meats prepared with nitrites and nitrates, such as bologna, hot dogs, salami and lunch meats;
- fewer barbecued and smoked meats.

## ***EATING FOR HEALTH***

Several studies have detected a link between certain types of food and the risk—or prevention—of certain types of cancer. Extra fiber in the diet, for instance, has been shown to lower the risk of colon cancer, while other studies have linked the consumption of red meat five or more times a week with cancer of the prostate, a gland at the base of men's bladders.

In general, a simple diet is a healthy diet, and the closer a food is to its natural state, the more healthful it will be. Changing food habits takes time, but by simply cutting back on fats, animal products and processed foods and increasing the amount of fresh fruits, grains and vegetables in our diet, we can improve our health and our feelings of well-being and perhaps reduce the risk of developing cancer at the same time.



# Diet for a Healthy Mouth

A balanced diet and good eating habits are as important for the teeth and gums as they are for the rest of the body. What we eat and how we eat it can have a major effect on our dental health.

A balanced diet includes a variety of foods from each of the food groups to assure that all the needed vitamins and minerals are there. Some vitamins and minerals are especially important for dental health. These include

- vitamin C for healthy gums,
- vitamin D to help the body use calcium,
- calcium to build healthy teeth.

The recommended dietary allowance for calcium is 800 milligrams for adults and up to 1,200 milligrams for teenagers and pregnant or nursing mothers.

## The When and What of Dental Health

When food is eaten has a big effect on dental health. Dentists recommend snacking less frequently and avoiding foods that stay in the mouth a long time. If you're going to eat these foods, they should be eaten as part of meals, since there is more saliva in the mouth both to break down the sugars that feed dental bacteria and to carry them away. Typical offenders are sticky, chewy or greasy foods, such as candy, cookies, cakes, granola bars, marshmallows, dried fruits and French fries. Sipping sweetened soft drinks or sucking hard candies are likewise hard on the teeth.

On the other hand, good snack foods include raw vegetables, plain popcorn, nuts, sunflower seeds and cheese. Nuts and cheese seem especially to protect the teeth from decay, although they are high in fat.

## Tips for a Healthy Smile

To keep your smile healthy, try these tips:

- Watch out for "hidden" sugar in processed foods, such as ketchup, canned vegetables and peanut butter. It is often in the form of corn syrup in the list of ingredients on the label.
- Keep healthy snacks on hand for when the urge strikes.
- Snack less often and floss and brush after snacking.
- Avoid sweet snacks at bedtime, when saliva flow is low.

See your dentist for regular oral hygiene appointments, floss and brush daily and observe these dietary tips for dental care. Your dental bills are bound to be greatly reduced and your smile as sparkling as ever.

# Facts About Fats

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Which fats are okay to eat and which are not? Are all fats the same? It is easy to get confused by all the advertising about saturated and unsaturated fats.

For nutritional purposes, we divide fats into three categories: saturated, monounsaturated and polyunsaturated, based on the amount of hydrogen each one carries.

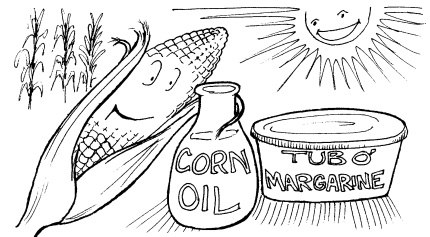
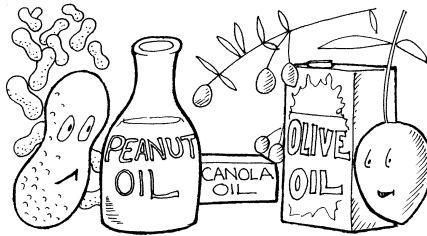
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## Telling the Difference



**Saturated fats** have no room for any more hydrogen. All animal fats, such as those in meat, poultry, dairy products and eggs, are saturated. Some of these are the least healthy forms of fat because they are high in cholesterol. Palm and coconut oils, though they don't contain cholesterol, are also saturated and may cause the body itself to produce higher levels of heart-threatening cholesterol.

**Monounsaturated fats**, such as olive, peanut and canola oils, have room for one more hydrogen atom and may be somewhat better for you than saturated fats.



**Polyunsaturated fats**, such as corn oil, have room for many more hydrogen atoms and may thus be the healthiest form. However, polyunsaturated oils in margarines that have been hydrogenated—chemically altered to make them solid at room temperature—can no longer be considered polyunsaturated. Soft margarines that come in tubs are less saturated than those that are firm at room temperature.

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## Fats and Cardiovascular Health

The evidence is not in on whether monounsaturated or polyunsaturated fats actually reduce the risk of cardiovascular disease. Most researchers, however, advise limiting *all* fats to less than 30 percent of total calories and especially avoiding saturated fats as much as possible.

Read the food label to find out the fat and cholesterol content of foods you buy. Avoid foods that contain palm or coconut oil regardless of their claims to be “cholesterol-free.” Pass up recipes that feature large quantities of olive oil and claim to be good for your heart. If you have heart disease, discuss your diet with your physician. Even though most researchers advise limiting all fats to less than 30 percent of total calories, restricting fat calories to 20 percent or less has been shown to reverse blockage of the arteries in some people.

**F**or years nutritionists have said that reducing calories is the key to losing weight. If a person eats fewer calories than are used up as energy, that person will lose weight. Now researchers are finding that the *kind* of calories eaten is just as important as the amount. Reducing the fat in the diet is more effective than just cutting back on total calories.

## Where Are Calories Found?

Three kinds of food provide calories: proteins, carbohydrates and fats. A gram of fat, however, has over twice the calories of a gram of either protein or carbohydrate. Because of this, a dieter who chooses low-fat foods can eat a lot more than one who chooses high-fat foods and can still stay within the target range of calories per day.

Dieters eating the larger amounts of food that low-fat diets allow are thus more satisfied and more likely to stick to the diet. Furthermore, they avoid the slowed-down metabolism caused by diets that severely restrict the total amount of calories eaten. In a recent study, women who reduced the percentage of fats in their diet without reducing the total calories they ate lost weight gradually and without experiencing food cravings.

## Figuring Calories From Fat

The first step in cutting back on fat is to become aware of the percentage of calories in your diet that comes from fat. Most food labels, for instance, list the number of *grams* of fat in a serving. If you don't see the number of *calories* from fat on the label, multiply the number of grams of fat in a serving by nine. Compare this figure, the number of calories from fat, with the *total* calories per serving. Try to eat foods that get one-fourth or less of their total calories from fat.

This is more than a fad diet. It's a weight-management plan meant for a lifetime. This is a plan you can not only live with, it can help you lose weight gradually—and keep it off.

# Fat Makes You Fat



*A dieter who chooses low-fat foods can eat a lot more than one who chooses high-fat foods and can still stay within the target range of calories per day.*

One dietary component that gets a lot of attention is fiber, or what everyone used to call "roughage." Studies have shown that a balanced diet containing different kinds of fiber can help regulate the bowels, lower the risk of certain cancers, aid in the prevention of heart disease and protect against a number of other health problems.

### How To Avoid Digestive Disorders

Fiber serves as a natural laxative by helping to absorb water in the digestive system, making the stool larger, softer and easier to pass. When treating constipation, a high-fiber diet is healthier than over-the-counter laxatives, because fiber doesn't produce harmful side effects the way those drugs can.

A high-fiber diet also helps prevent many disorders of the digestive system, including hemorrhoids, diverticulosis, irritable bowel syndrome and other inflammations or infections.

### Additional Benefits of Fiber

Another way fiber contributes to good health is by helping to

# Fiber in the Diet

protect against cancer of the colon and rectum. Foods that contain fiber also tend to contain other cancer-fighting nutrients, such as vitamin A, vitamin C, vitamin E and selenium.

One of the most encouraging findings about high-fiber diets is that they appear to lower cholesterol and triglyceride levels, both of which have been linked to heart disease. People who eat a diet high in fiber have a substantially lower risk for cardiovascular problems, such as heart attacks and strokes.

### Where To Find Fiber

Fiber is readily available in whole grains, fresh fruits, vegetables, peas and beans. Many food companies are also producing breads, cereals and other products that offer substantial amounts of fiber.

Good sources of fiber in snacks include popcorn, rice cakes, potatoes with their skins and carrot sticks. Gradually start replacing sugary, high-fat, high-cholesterol foods with foods like these, and you'll soon be enjoying substantial health benefits.



# Nutrition for the Later Years



**G**ood nutrition means much the same for young and old alike—eating a variety of healthy foods from all the food groups and being moderate about fats, sugars and salt.

As people age, however, body composition changes. There is less muscle and more fat. Because of this, fewer calories are needed. Yet older people need the same amounts of vitamins and minerals as when they were younger, and possibly more calcium.

## **Making Up for Deficiencies**

Poor nutrition in the elderly can lead to such diseases as high blood pressure, heart disease, diabetes and osteoporosis. Older people thus need to cut back on such high-calorie foods as fat and sugar, while making sure they get enough of such nutrients as

- vitamin D, which helps the body use calcium;
- calcium, which keeps bones strong and helps prevent osteoporosis;
- fiber, which helps prevent constipation;
- iron, which helps red blood cells efficiently carry oxygen throughout the body;
- zinc for crucial chemical and metabolic functions in the body.

## **Sources of Nutrients**

The body makes vitamin D in the presence of sunlight. However, those who stay indoors a lot can get vitamin D from fish, eggs and fortified milk. The biggest sources of calcium are dairy products, canned fish with edible bones, spinach, broccoli, citrus fruits and dried peas and beans. Supplements may be recommended for those who don't eat enough of such foods. Fiber is found in vegetables, fruits, whole grains and cereals. Good sources of iron include dried fruits, lima beans, spinach, prune juice, beef and organ meats, while zinc is found in oysters, herring, meat, milk and whole grains.

## **Problems and Solutions**

As people age, they may find it difficult to prepare and shop for food. Seniors who live alone may be tempted not to bother with cooking. Other causes of poor nutrition in the elderly may include a poor sense of smell, difficulty chewing, loneliness and depression.

Some ways to ease the stress of preparing food are to join a senior citizens center where meals are available to people in groups, organize potluck meals with friends or find out if there is a community service that delivers hot meals to the homes of seniors. Getting the nutrition you need will help you get the best out of your later years.

# What Is Obesity?

Simply put, anyone who is more than 20 percent above normal body weight for his or her height and frame size is obese. Normal height and weight are listed in actuarial tables, such as the Metropolitan Life Insurance Height and Weight Table.

In reality, figuring out if a person is obese is more complicated than simply measuring a person's weight. A person who has lots of muscle mass, such as an athlete, may weigh more than 20 percent above the average weight and still not be obese. This is because muscle tissue is heavier than fat tissue. Likewise, a person who is very inactive may be obese even at weights less than 20 percent over the norm.

## Accurate Measurement

Many doctors believe that measuring the percentage of a person's body that is fat is a more accurate way of determining if the person is obese. Methods for doing this include skinfold measurements, circumference measurements and hydrostatic weighing, which requires a person to be weighed while completely underwater.

## Why You Should Know

People who are significantly overweight increase their likelihood of developing:

- heart disease.
- high blood pressure.
- diabetes.
- chronic back pain.
- joint pains.

Your doctor can help you decide if you need to lose weight and plan a strategy for losing weight and keeping it off. Most nutritionists and registered dietitians agree that the best way to keep your weight down is to avoid fad diets, get plenty of exercise, change your eating habits and lose weight gradually, rather than quickly by replacing fatty foods with a diet that stresses complex carbohydrates and some protein. If you've determined that you truly are obese, following these basics can bring you down to a weight that's right for you. You're bound to feel better, too.

# Overweight or Overfat?



**Y**ou may not be overweight, but you could be overfat and vice versa. Where health is concerned, “fat,” not “weight,” is the key issue.

Excess fat is a factor in high blood pressure, heart disease, diabetes and cancer. Excess fat stresses the cardiovascular system and reduces the body’s ability to work efficiently. So when assessing your ideal weight, it’s the percentage of your body that’s composed of fat, and not your weight in itself, that makes the difference.

## Ideal Fat Percentages

When we talk about body fat we mean the *percentage* of your body weight that is made up of fat. This percentage varies for men and for women. For men, the ideal percentage of body fat is 12 percent to 17 percent. For women, the ideal percentage of body fat is 15 percent to 23 percent. All of us require some stored body fat for fueling energy. If the body has too little fat, it will begin to break down muscle tissue for energy requirements. The minimum essential fat requirement for women is 12 percent, and for men 5 percent.

## Measuring Body Fat

Underwater weighing is the most accurate measurement of body fat and is available at some fitness centers, hospitals and clinics. Since fat is more buoyant than lean muscle, an overfat person will actually weigh less underwater than a trimmer person.

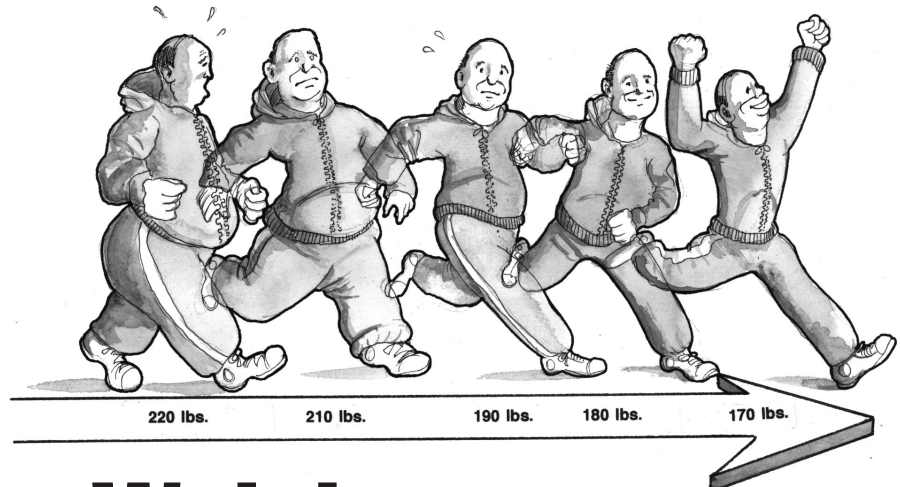
Another instrument for measuring body fat is skinfold calipers, which measure the fat below the skin’s surface. Although they’re less accurate, for many people, skinfold tests may be more convenient than underwater weighing, since they’re usually less expensive and may be more readily available in some areas than underwater weighing. If you’re interested in obtaining a skinfold assessment, try contacting your local hospital, a certified nutritionist or dietitian, your local health club or your family doctor. Many college or university physical education departments perform skinfold tests as a community service. You can also contact your community health department for information and referrals.

## The Essential Facts

For optimum health and fitness, it pays to maintain your body fat within the accepted norms. Exercise and diet go hand-in-hand in helping to reduce excess body fat. Aerobic exercise—the kind that uses large muscles for an extended period of time—uses oxygen to “burn” fat for energy. Also, a diet low in fat and sugar, and high in complex carbohydrates can improve your body’s ability to run efficiently.



# Diet, Exercise and Losing Weight



**W**e now know that most diets don't work. Permanent weight loss comes to only about 2 percent of those who follow standard, low-calorie, reducing diets. The other 98 percent gain back the weight they lose within a year, often adding a few extra pounds in the process. So what's a health-conscious but overweight person to do?

We need to redefine the word diet. If we think of a healthy diet instead of a reducing diet, a shift in viewpoint may take place. Learning how to eat for a lifetime, instead of trying to "blitz off" 10 pounds in two weeks, requires us to learn more about food and nutrition. If we emphasize a variety of whole foods in moderation, we can't go wrong.

## **The Villain of Weight Loss**

Studies have shown that if there's a central villain in the weight-loss drama, it's dietary fat. Fat has nine calories per gram, while proteins and carbohydrates have only four. What's worse, fat can contribute to heart disease, diabetes and some forms of cancer.

The typical North American diet is too high in fat. What you eat may be more important for weight loss than how much you eat, so the best things to do are to cut way down on dietary fat and to eat healthy foods.

## **The Key to Weight Management**

Experts also believe that exercise is the key to attaining and maintaining normal weight. We now know that prolonged, steady exercise "burns" fat in the body. Frequent long walks, aerobic dance, biking, jogging, swimming or any activity that elevates the heart rate and can be done three to five times a week for at least 20 minutes, will make a difference.

So the principles are simple: Avoid fat in your diet and follow a regular exercise program. It's a combination that's just about unbeatable when it comes to losing excess weight and keeping it off.

# Why Diets Don't Work

Dieting is big business. Over the air and through massive magazine ad campaigns come promises of quick, safe and guaranteed weight loss—for a fee. Although most diet programs don't keep accurate information on their

results, informal surveys have revealed that very few dieters will have maintained their weight loss at the end of one year. The people who benefit most from these diets are those who sell them.

## Habits, Starvation and Yo-Yo Dieting

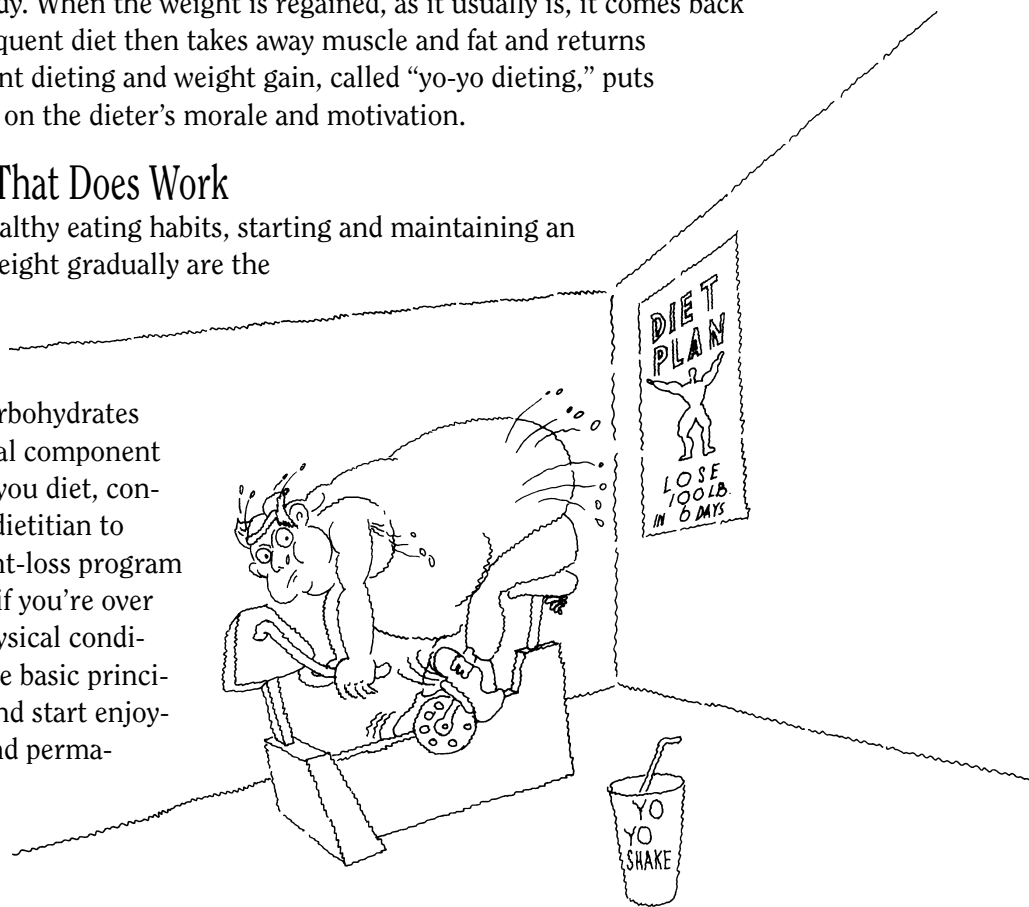
There are several reasons why such dieting doesn't work. First, the diets are usually boring and unnatural, especially if they involve special diet foods or eating schedules rather than a permanent, healthy change in eating habits. Most people go back to their old eating habits once they "finish" the fad diet.

Second, such dieting often lowers the body's metabolism. The body shifts into starvation mode and cuts back its calorie needs in order to survive. The starvation mode can last for months after the diet is ended, causing weight gain on fewer calories than before.

Third, dieting changes the percentage of fat in the body. Quick weight loss removes both fat and muscle tissue from the body. When the weight is regained, as it usually is, it comes back in the form of fat. Every subsequent diet then takes away muscle and fat and returns only fat. This pattern of frequent dieting and weight gain, called "yo-yo dieting," puts a strain on the heart as well as on the dieter's morale and motivation.

## A Weight-Loss Program That Does Work

Studies show that choosing healthy eating habits, starting and maintaining an exercise program and losing weight gradually are the most effective ways of reducing your weight permanently. Replacing excess fat in the diet with complex carbohydrates and some protein is an essential component of gradual weight loss. Before you diet, consult your doctor or a licensed dietitian to help you come up with a weight-loss program that really works, particularly if you're over 40 or suffer from a chronic physical condition. Once you commit to these basic principles, you can forget fad diets and start enjoying the benefits of healthy—and permanent—weight loss.



# Safe Weight Loss

Many people have trouble controlling their weight and are frustrated by diets that just don't work. They may not realize that the key to successful weight loss is to develop everyday eating habits that automatically promote good health. Successful weight-reduction programs include a satisfying, balanced diet; daily exercise; and a healthy overall attitude toward food.

## Balance Counts More Than Quantity

For weight loss that lasts, eat complete, balanced meals instead of highly restricted ones. Balanced meals still mean giving up high-fat, high-calorie foods. However, the taste buds eventually become accustomed to healthier sensations and gradually lose the need for salt, sugar and fats.

To maintain a healthy diet, focus on the following foods:



- rice, barley and other whole grains;
- breads and pastas made from whole grains;
- fruits and vegetables;
- lowfat protein sources, such as lean meats, skinless poultry, fish and dried peas or beans;
- lowfat or nonfat milk products.

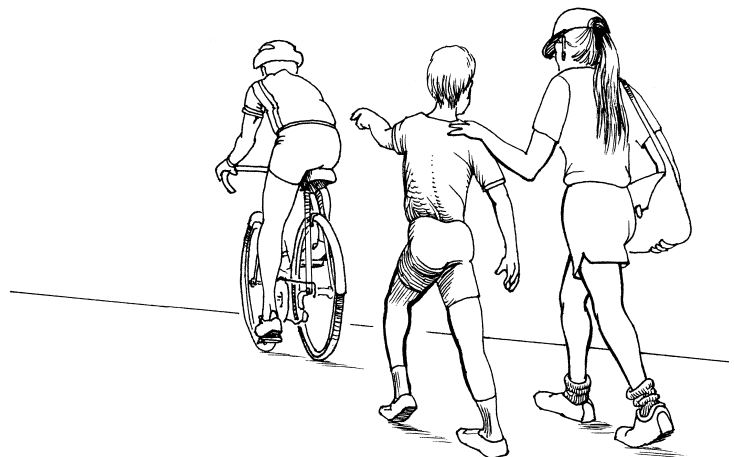
## The Role of Exercise in Weight Loss

Exercise is another important part of successful weight-loss plans. Exercise helps people use more calories than they consume, and that's what it takes to lose weight. Brisk walking is a good choice for many people, because it's easy and safe and can be done almost anywhere.

Here are some other tips to improve eating habits:

- Take part in pleasurable activities that aren't related to food.
- Turn meal times into special focused breaks from the daily routine.
- Avoid eating while watching TV or reading.
- Chew slowly to fully enjoy meals.
- Learn the pleasures of shopping for healthy foods.

Good food, exercise and a positive attitude really help people reach and maintain a healthy weight, and that creates a strong sense of accomplishment and personal satisfaction.



# TEACHING YOUR BODY TO “BURN” MORE CALORIES



Researchers studying human behavior have made an interesting discovery: Thin people fidget more than fat people. The theory is that the extra body movements “burn up” calories that would otherwise be turned into fat. Researchers stopped short of recommending fidgeting as a weight-loss technique, but clearly there are things that anyone can do to “burn” more calories.

## THE ROLE OF EXERCISE

Weight control experts recommend at least 20 minutes of aerobic exercise four to five times a week as the single most effective thing a person can do to lose weight and keep it off. Aerobic exercise includes such activities as running, swimming, bicycling or dancing—any activity that raises the heart rate. Not only does the exercise itself use up calories, but it raises the body’s overall metabolism to use them up at a higher rate. Constant dieting, on the other hand, often turns down the metabolism so that the dieter actually gains weight on fewer calories than the nondieter.

## GETTING YOUR LIFESTYLE INTO THE ACT

In addition to planned, regular exercise, a number of lifestyle changes can raise anyone’s level of daily activity. These include:

- using the stairs instead of the elevator,
- parking at the back of the parking lot,
- riding a bicycle to work,
- getting rid of the TV remote control,
- using a push lawnmower,
- unplugging “labor-saving” devices and using the manual versions instead.

Can you think of lifestyle changes you can make to boost your level of activity? If you’re also thinking of beginning an exercise program, good for you! If you’re over 40 or have an ongoing physical condition or other limitation, ask your physician first. Do some research and choose an exercise you enjoy. You’ll be more likely to stick to it.

# FIBER

## And Weight Loss

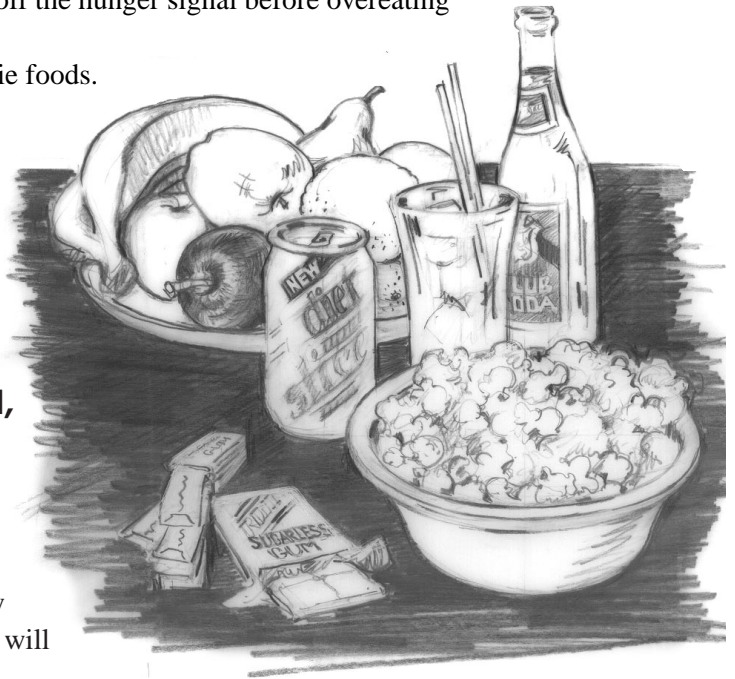
Fiber is the part of food that is not absorbed by the body. There are several reasons why fiber can be considered the dieter's friend. For instance, while high-energy foods are absorbed quickly into the body, to be used for energy or stored away as fat, fiber from a high-fiber meal remains in the digestive system longer. It gives a feeling of fullness without extra calories. This helps thwart the temptation to overindulge in more fattening foods.

In addition, foods containing high amounts of fiber take longer to chew and eat. This slower eating time also gives the body a chance to register its fullness and turn off the hunger signal before overeating takes place.

Finally, high-fiber foods are usually lowfat, low-calorie foods. Such foods include:

- **fruits without added sugar;**
- **vegetables;**
- **whole-grain breads, pastas and cereals;**
- **brown rice;**
- **potatoes with their skins;**
- **popcorn that is air-popped or without oil, butter or margarine;**
- **beans without bacon or lard.**

Dieters can eat much larger quantities of these foods without going beyond their calorie limits as long as they don't overdo it. Eating even low-calorie foods in excess will cause weight gain.



### Delicious High-Fiber Options

Some fiber-rich snacks include:

- **fresh fruits;**
- **celery or carrot sticks, cucumber spears, sliced jicama or other favorite raw vegetables;**
- **unbuttered popcorn;**
- **rice cakes.**

A plate of attractively cut raw vegetables with a lowfat dip, such as yogurt seasoned with spices and herbs, makes a good appetizer, and it takes the edge off of one's hunger, so the meal can be enjoyed in a leisurely and moderate fashion.

Increase the fiber in your diet gradually. Too much fiber too soon can cause cramps and bloating. Since fiber absorbs water, be sure to drink plenty of water and other fluids with it. Extremely high amounts of fiber in the diet can deplete the body of certain vitamins and minerals. However, with a reasonable amount of fiber in your diet you can reap substantial nutritional benefits—and enjoy some tasty and satisfying foods in the bargain.

# Hazardous Weight Loss

**O**besity, which is defined as being 20 percent or more over one's ideal weight, has been implicated in heart disease, diabetes and some forms of cancer. But even though these diseases claim so many lives, losing weight too quickly or too often can also be hazardous to one's health.

The key words to remember are "balanced," "moderate" and "permanent." We are now learning that typical reducing diets don't work. Most people who follow diets based strictly on calorie restriction regain the pounds they lost within a year, and they may have harmed their health in the process. Studies now show that it may be healthier to have never dieted at all than to keep losing and then regaining the same 10 to 20 pounds.

## The Dangers of Crash Dieting

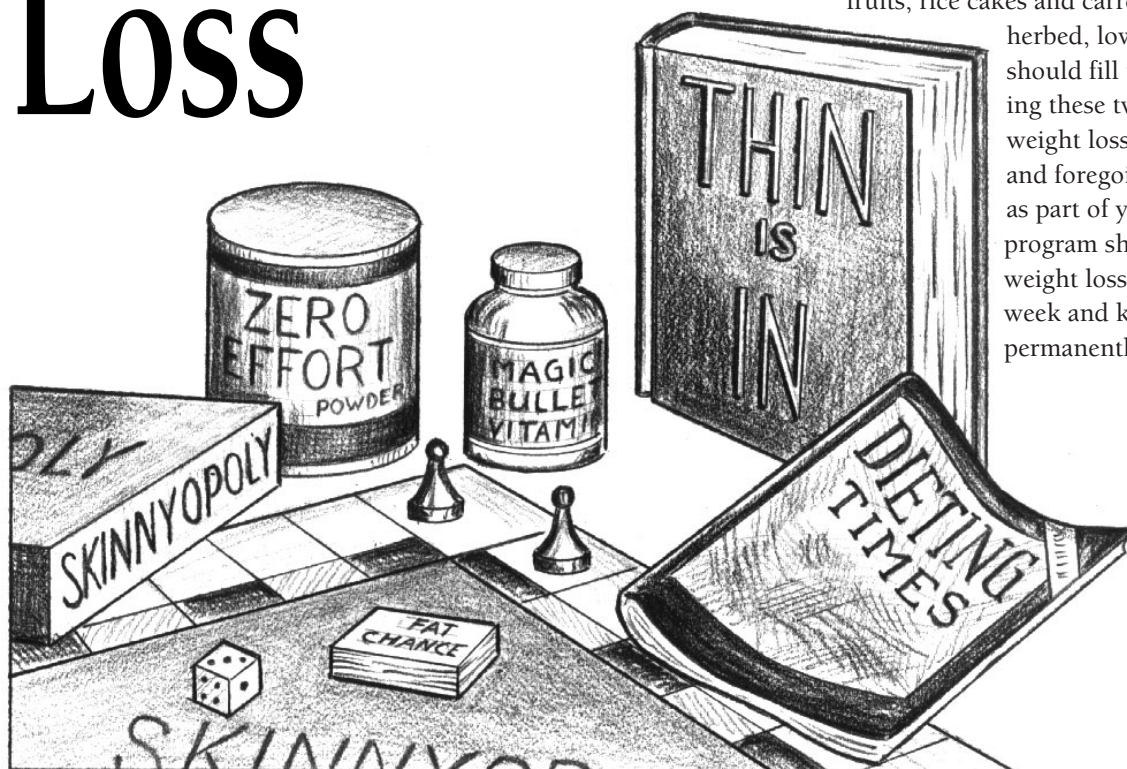
A very low-calorie reducing diet may convince the body that it is starving. In response, the body may lower its metabolic rate, the rate at which it converts food to energy.

Starvation can also alter the body's ratio of fat to lean body mass, which is primarily muscle. Extreme dieting tends to decrease lean body mass as well as fat. Muscle metabolizes energy more rapidly than fat tissue does. But when the dieter regains lost weight, it often contains a greater percentage of fat than the weight lost contained.

## The "Pillars" of Weight Loss

If crash diets don't work, what does? For balanced, moderate and permanent weight loss, what seems to work best is regular exercise and eliminating foods high in fat. "Exercise" doesn't have to be weightlifting or a marathon. Just 20 to 30 minutes of brisk walking at least four to five times a week is sufficient. Replace fatty foods with high-fiber foods, which can be just as filling. Foods such as unbuttered popcorn, fresh fruits, rice cakes and carrot sticks with an

herbed, lowfat yogurt dip should fill the bill. Maintaining these two "pillars" of weight loss (regular exercise and foregoing high-fat foods) as part of your lifetime fitness program should achieve a weight loss of about a pound a week and keep the weight off permanently.



# Fasting and Liquid Diets

Fasting has at times been popular as a way to cleanse the body of impurities and aid weight loss, but fasting almost never causes permanent weight loss, and it can be dangerous. The same is true for liquid diets.

Fasting and many liquid diets cause toxic substances called ketones to be produced that upset the body chemistry and put an extra strain on the kidneys. In extreme cases, such diets can cause kidney damage. To wash out these toxins, extra water is excreted in the urine, causing only a temporary weight loss.

A second problem with any diet that severely restricts calories is that the body must use its own tissue for fuel. Because the body can convert muscle tissue into fuel more easily than it can convert fat tissue, the body draws on muscles and major organs, such as the heart, for fuel. Fasts and diets that claim to “burn” fat are actually drawing on needed body tissue.

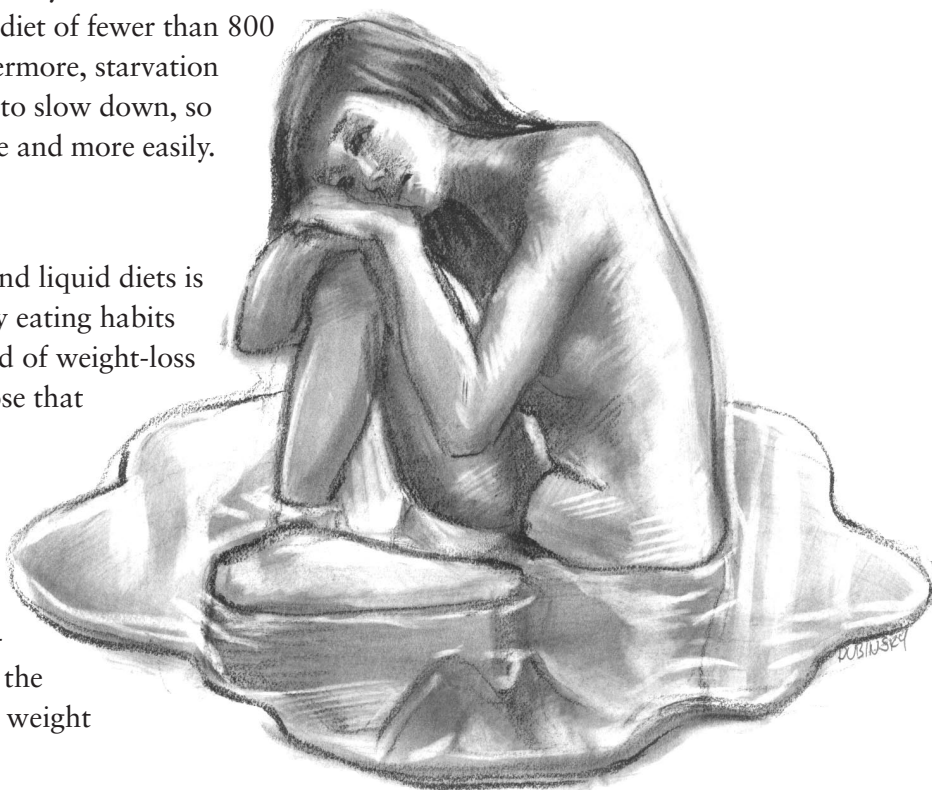
## The Liquid Diet Controversy

At one time, high-protein liquid diets with as few as 400 calories per day were popular. These extreme diets had poor nutritional quality and were linked to several deaths from irregular heart rhythms and cardiac arrest.

Although high-protein, over-the-counter, liquid diets are now prohibited, some medically supervised liquid diets are used along with a behavior modification program. But even these diets don't have proven results over the long term, two to five years down the road. Professionals warn that any diet of fewer than 800 calories a day is dangerous. Furthermore, starvation diets cause the body's metabolism to slow down, so that weight is actually gained more and more easily.

## Once the Diet Ends

Another disadvantage to fasting and liquid diets is that they don't provide for healthy eating habits once the diet is over. The only kind of weight-loss programs that really work are those that involve long-term and permanent changes in eating and exercise habits. So before deciding to fast on your own, investigate a reputable weight-loss program. Your doctor or a registered dietitian should be able to steer you in the right direction. You can then lose weight safely—and keep it off.



# OVERCOMING BACKSLIDING

Rare is the person who sets up a weight-control program and follows it to completion without wavering. Most of us experience some backsliding along the way. Recognizing our weaknesses and learning from backsliding episodes are the keys to successful weight management.

The first step in overcoming backsliding is to become aware of what's most likely to cause it. Some common causes are:

- conflict in the home.
- boredom.
- discouragement with slow progress.
- social situations.
- impulse eating.
- lack of self-confidence.

When backsliding occurs, it helps to evaluate the situation. What caused the lapse? What preparation can be made now so that it won't happen again?

## APPROPRIATE RESPONSES TO BACKSLIDING

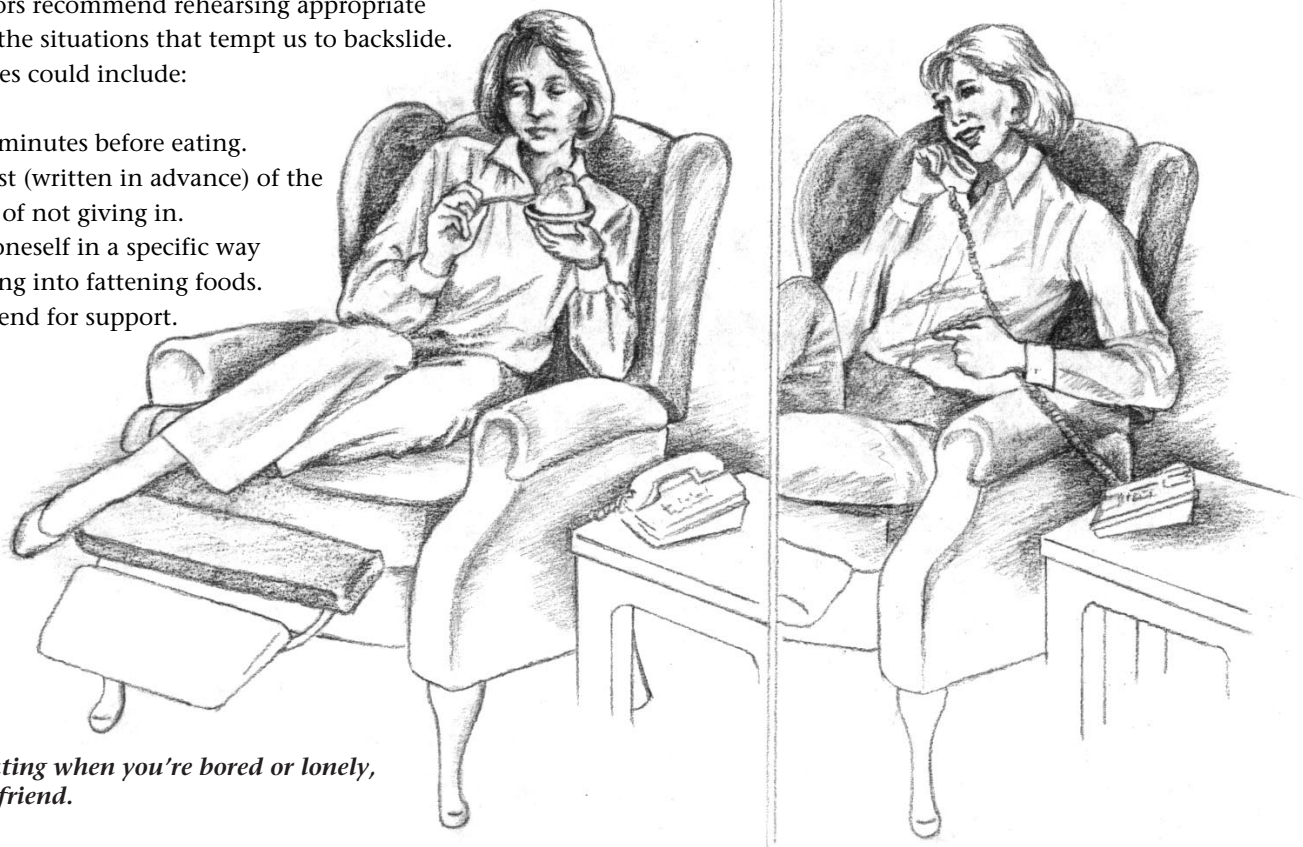
Diet counselors recommend rehearsing appropriate responses to the situations that tempt us to backslide. Such responses could include:

- waiting 10 minutes before eating.
- reciting a list (written in advance) of the advantages of not giving in.
- rewarding oneself in a specific way for not giving into fattening foods.
- calling a friend for support.

When backsliding is a result of thinking patterns, it helps to recognize those patterns, deliberately turn them off when they begin and then focus on the benefits of staying on track.

## DON'T GIVE UP

What causes you to backslide? Take a moment now to list your vulnerable points and practice a response to them. For instance, if boredom causes you to backslide, make a list of activities to overcome boredom: take a walk, write a letter or treat yourself to a movie. Give yourself some positive feedback for your successes. Keep the phone number of a supportive friend handy for when you feel weak. If conflict with a family member or spouse triggers backsliding, get outside help. Talk to a counselor, pastor, doctor or trusted friend about working out the problem. Above all, don't give up. Everyone backslides sometimes. Treat backsliding episodes as opportunities to learn from your mistakes.



*Instead of eating when you're bored or lonely, try calling a friend.*



# The Overweight Child

Parents of overweight children are rightfully concerned about getting the child's weight under control before the child becomes an adult. Weight becomes increasingly difficult to lose as the years go by. However, overweight children must be treated with care and consideration.

Most nutritionists stress weight management rather than weight reduction for children. The strategy is to keep extra weight from being put on and to let the child's growth catch up with the excess weight.

## Why Some Children Are Overweight

Children may be overweight for a number of reasons. If the parents are overweight, the child may simply have inherited the parent's heavy body type. Family eating habits may also be responsible for the excess weight. A third common cause of overweight in children is inactivity.

Regardless of the reason for a

*Regardless of the reason for a child being overweight, managing a child's weight involves the whole family.*

child being overweight, managing a child's weight involves the whole family. Overweight children invariably resist if they feel singled out for restrictions. Family eating patterns can be changed in the following ways:

- Keep high-calorie foods, such as sweets, potato chips and other junk food, out of the house.
- Set an example with your own eating behavior.
- Don't encourage children to "clean their plates" in order to get dessert or some other reward.

- Don't use food as a reward or for "comfort."

## The Most Important Step

Getting the child more physically active is perhaps the most important step in managing a weight problem. Activities such as sports, swimming or dancing can be offered, according to the child's interests. Again, children respond more positively if parents are involved in such activities too.

If you have an overweight child, ask your child's pediatrician or a registered dietitian about changing your child's diet, but be aware that restrictive diets can be dangerous for growing children. Offer your child plenty of positive support and avoid nagging or criticizing your child. Don't expect quick results. The best weight-management programs are the ones that work slowly by changing basic eating patterns rather than going for quick weight loss.

# Overcoming **BINGE** Eating

Most of us have overeaten from time to time, but a full-scale binge goes beyond overeating. In a typical binge, high-calorie foods, such as pastries and ice cream, are eaten rapidly and continuously until the eater is stopped by pain, the need to vomit, sleepiness or is interrupted by someone. After a binge, the eater may feel relief, deep shame or guilt. Bingers often compensate for bingeing by fasting or going on extreme diets between binges. However, these diets may actually cause more bingeing.

## **Recommended Strategies**

Nutritionists have developed some guidelines for preventing binge eating. They recommend

- avoiding very strict diets that lead to severe hunger pangs.
- eating regular meals and light low-calorie snacks between meals.
- keeping the kinds of foods that are eaten during a binge out of the house.
- analyzing past episodes, noting when they happened, what mood triggered them, what was eaten, where the food came from, the location of the eating and any other useful information.

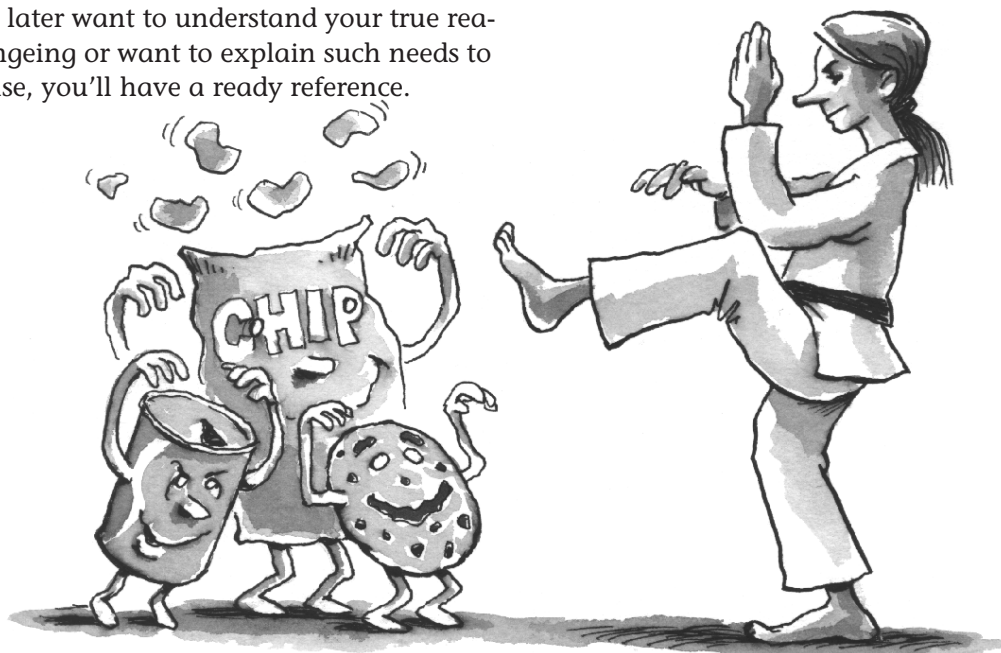
The binger can then develop a strategy for the future. This might include avoiding situations that lead to binges and a plan to follow when the urge to binge strikes. Keep a record of your binge eating, noting how you felt during the binge and what led to it. If you later want to understand your true reasons for bingeing or want to explain such needs to someone else, you'll have a ready reference.

## **On the Brink**

When you find yourself on the brink of a binge, try these approaches:

- Wait 10 minutes before you give in. During that time, do something else, such as taking a walk or calling a friend. You may forget all about bingeing, or the temptation may at least weaken.
- Before beginning, drink a glass of water or eat an apple or other high-fiber food. The fullness in your stomach may stave off the urge to binge.

Bingeing is a serious health problem. If it continues in spite of your efforts, see your doctor or a registered dietitian. Get help in developing a weight-control program that encourages gradual and permanent weight loss through healthy eating habits and regular exercise.



# Cooking & Eating Right

## Exercise Basics

## Getting & Keeping Fit

## Nutrition Basics

<b>Eating Well for Less</b>	<b>Kicking the Junk Food Habit</b>
<b>Eating Triggers</b>	<b>Cooking With Less Fat and Oil</b>
<b>Carbohydrates: How Much Is Enough?</b>	<b>Cooking With Less Salt</b>
<b>Protein: How Much Is Enough?</b>	<b>Cutting the Fat Out</b>
<b>Fat: How Much Is Enough?</b>	<b>Great Grains</b>
<b>Calcium: How Much Is Enough?</b>	<b>Fruit Is Good Food</b>
<b>Water Is Essential</b>	<b>Egg-citing Eggs</b>
<b>A Little Sodium Goes a Long Way</b>	<b>When You Choose Beef</b>
<b>Vitamin and Mineral Supplements</b>	<b>There's Something About Spuds</b>
<b>Caffeine: More Than a Quick Pick-Me-Up</b>	<b>Beans and Legumes</b>
<b>Fake Fats</b>	<b>Healthy Snack Foods</b>
<b>Fat-Free Foods</b>	<b>Should You Feed Your Kids Cartoon Foods?</b>
<b>Sugar Is Sweet by Any Name</b>	<b>Checking Out "Health Foods"</b>
<b>Sugar Substitutes</b>	<b>Vegetarianism</b>
<b>Curbing Your Sweet Tooth</b>	<b>Using a Food Diary</b>



# EATING WELL FOR LESS

**W**ith the high prices of foods these days, people may feel they cannot afford good nutrition. But here's some good news: the most nutritious foods are almost always the least expensive ones.

When we think of inexpensive foods, we probably think of starchy, filling foods, such as potatoes, rice, pasta and beans, which we may have been taught to believe are fattening. Actually these foods, which are rich in complex carbohydrates, are among the healthiest foods we can eat. They are fattening only if served with butter or other high-fat dressings. For the same number of calories, a person can eat over twice as much food with complex carbohydrates as high-fat foods.

## More Money-Saving Tips

In addition to stocking up on complex carbohydrates, cost-conscious shoppers follow this checklist:

- Avoid processed foods. They're expensive and usually high in fat and salt. Or look for brands of convenience foods that are nutritious.
- Buy lower-grade cuts of meat. They usually have less fat.

- Buy in larger quantities.
- Buy regular rather than instant rice, oatmeal and farina.
- Buy sharp cheeses, which give more flavor per ounce and can be used more sparingly. Grate them at home.
- Buy fresh vegetables in season. They're cheaper than canned or frozen versions.
- Read the shelf label below each product and buy the product that costs less per unit of weight.
- Buy generic brands.
- Check newspapers for specials on healthy foods and plan meals around them.

## Good Nutrition Comes First

When planning economy meals remember to choose a variety of nutritious foods and avoid too much fat, sugar and salt. The best way to do this is to cook meals "from scratch," using fresh ingredients. Use herbs and lemon juice instead of salt. A good cookbook can help you develop recipes that your family enjoys. If you don't have time to cook from scratch, try to find prepared foods that are high in nutritious ingredients and low in fat, sugar and salt.

# EATING TRIGGERS



**T**he aroma of delicious food and the sight of an attractively prepared meal trigger an immediate bodily response in most people. We begin to salivate, and the stomach secretes digestive juices. Such eating triggers prepare the body to digest food.

There are many things that can trigger eating. For some people, just the presence of high-calorie snacks in the house or at work is an eating trigger. Such people are wise to keep these foods out of the house and not to store them in their desks at work. By the same token, people who go into an “eating mode” when walking past a bakery should take a different route.

## Indirect Triggers

Unpleasant emotions, such as boredom or anger, can trigger the need to eat in some, while enjoying the company of friends just naturally makes others want to eat. One common eating trigger is found in most living rooms, the TV. Many people make a

habit of getting up during every commercial to grab a quick snack. The commercials themselves may be about food, which can also trigger the urge to eat.

## Your Food Diary

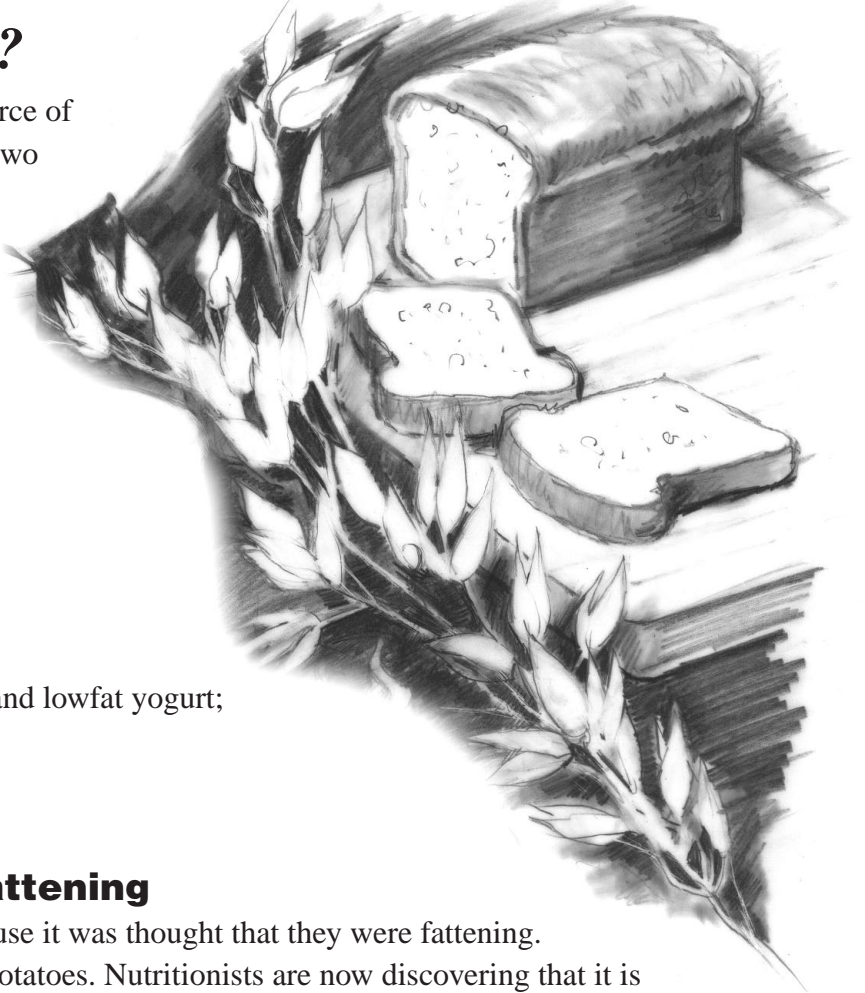
Recognizing eating triggers is an important first step in getting control of them. Try keeping a food diary for a couple of weeks. Make a note of when you eat and what you are doing and thinking at the time. When you’ve identified your triggers, you’re ready to do something about them. For example, if TV is your trigger, make a rule that no eating takes place while the TV is on. Or take up knitting to keep your hands busy. Or get involved in activities that don’t leave you time for TV. You might even consider joining a weight-control clinic or a program, such as Overeaters Anonymous, to help you identify eating triggers and ways to defuse them. Once you control the what, when, where, how and why of eating triggers, they’ll have no more power over your appetite.

# CARBOHYDRATES

## *How Much Is Enough?*

**C**arbohydrates are the body's main source of energy. Most carbohydrates fall into two categories: simple carbohydrates, or sugar, and complex carbohydrates, often called starch. Complex carbohydrates are found in such foods as

- ✓ breads;
- ✓ pastas;
- ✓ potatoes;
- ✓ cereals;
- ✓ rice;
- ✓ beans;
- ✓ dairy products, such as skim milk and lowfat yogurt;
- ✓ fruits;
- ✓ vegetables.



## **Carbohydrates Are Less Fattening**

At one time, dieters avoided starches because it was thought that they were fattening. They would eat the meat and pass up the potatoes. Nutritionists are now discovering that it is easier to maintain an ideal weight on a diet high in complex carbohydrates. The reason is simple: Complex carbohydrates are low in calories and often rich in fiber. Thus, they are far more filling than the same number of calories in such high-fat foods as meat and cheese. Compare the 110 calories of a five-ounce potato (with lemon juice instead of butter or sour cream) to the 550 calories of a five-ounce T-bone steak.

## **Increasing Complex Carbohydrates**

Nutritionists recommend that 55 percent to 60 percent of our calories come from complex carbohydrates. For example, an average person on a 2,000-calorie diet would allow 1,200 calories for carbohydrates. The average American diet now supplies only about 45 percent of calories from complex carbohydrates. You can figure the percentage of carbohydrate calories in a serving of a labeled food product by multiplying the grams of carbohydrate by four and dividing by the total calories.

To increase the complex carbohydrate portion of your meal, make potatoes, pasta or rice with vegetables the centerpiece of your meal. Treat the meat as a side dish or skip the meat altogether some of the time. Choose lowfat sauces or dressings instead of butter or cream. Cut back on sugar, which supplies only “empty” calories. You can even lose excess weight or maintain your ideal weight by getting regular exercise and replacing fats with complex carbohydrates.

# PROTEIN

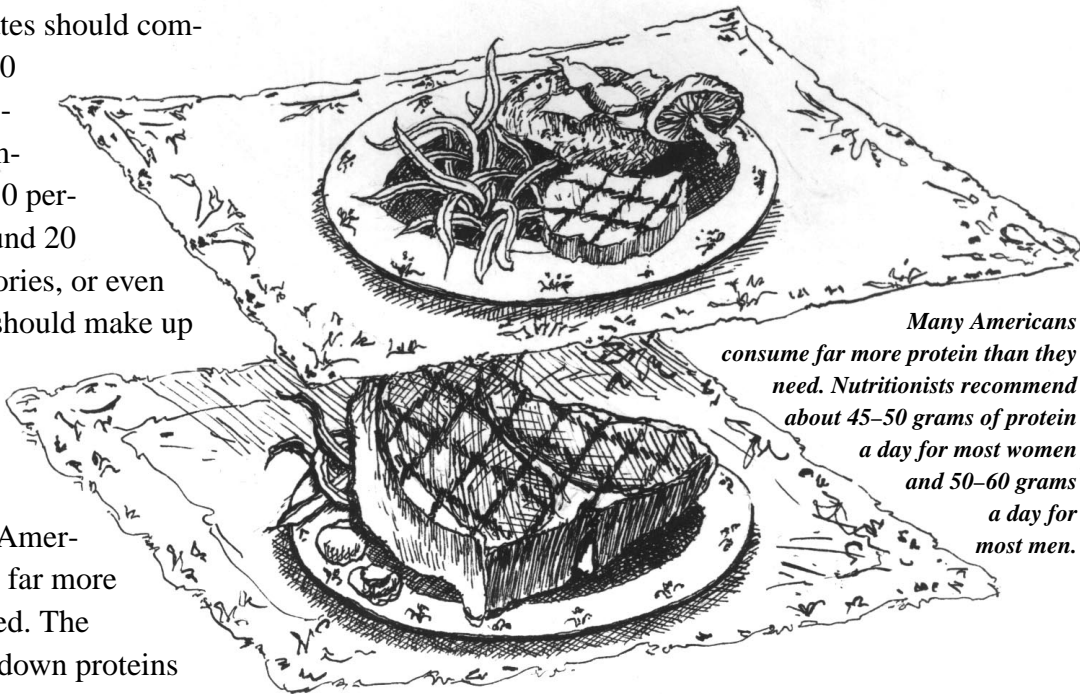
## *How Much Is Enough?*

**P**rotein provides the body's building materials, the essential nutrients for growth, maintenance and repair. We all need protein, but protein deficiency is rare in the developed world.

### **The Protein Problem**

How much protein do we need? Nutritionists recommend about 45 to 50 grams of protein a day for most women and 50 to 60 grams a day for most men. Children and infants, who are growing rapidly, need more protein, as do pregnant women. For most people, complex carbohydrates should comprise 55 percent to 60 percent of daily calories. Fats should comprise no more than 30 percent, preferably around 20 percent, of daily calories, or even lower, and proteins should make up the remaining 10 percent to 20 percent of daily calories.

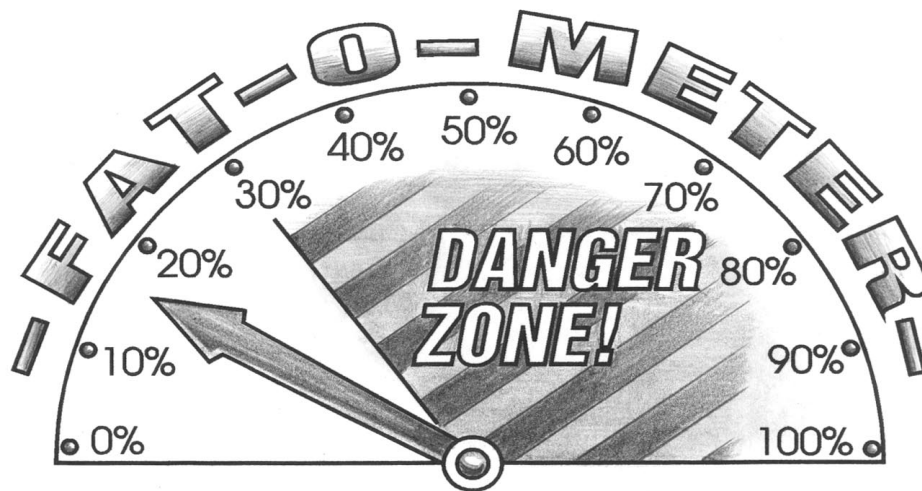
However, many Americans are consuming far more protein than they need. The process of breaking down proteins into amino acids and absorbing them puts a strain on the kidneys. Furthermore, although protein itself has less than half as many calories as the same amount of fat, most protein sources, such as cuts of beef that are not lean, are also high in fat, which is unhealthy in large quantities.



*Many Americans consume far more protein than they need. Nutritionists recommend about 45–50 grams of protein a day for most women and 50–60 grams a day for most men.*

### **Where To Find Protein**

Excellent sources of protein are lean meat, fish, poultry, eggs, dairy products and legumes (beans and peas). Whole grains, such as brown rice, barley and millet, are also good sources of protein. Even vegetables have some protein. Follow your physician's advice on protein requirements during pregnancy and for children. However, most people would do well to shift their intake of daily calories toward complex carbohydrates until they reach the recommended percentage. With a balanced diet they'll still get all the proteins they need.



# FAT

## *How Much Is Enough?*

In the early days of human existence, food with enough fat was scarce and highly valued as a rich source of energy. Humans can't live without some fat in the diet. But how much is enough?

### THE PERCENTAGE OF FAT CALORIES

Nowadays, most nutritionists like to look at amounts of fat in terms of a percentage of the total number of calories in the diet. Most Americans get 40 percent or more of their calories from fat. The American Heart Association and other organizations would like to see this number dip below 30 percent. For those adults with heart disease, a diet of 20 percent or even 10 percent of calories from fat is advised.

### THE FORMS OF FAT

The types of fat we eat are also factors in our health. Researchers

believe that unsaturated oils, such as olive oil and corn oil, are better for the heart than saturated fats, such as butter and animal fat, and better than tropical fats, such as palm oil and coconut oil. Margarines are made from oils that have been hydrogenated, or essentially turned into saturated fats. They should also be eaten sparingly.

### FIGURING FAT INTAKE

Regardless of type, all fat has nine calories per gram. Food labeling laws in the United States now require the percentage of fat in a serving of food to be listed (the "Percentage of Daily Value" or DV). If the DV isn't listed, divide the number of grams of fat shown on the label by 65 (which is about the maximum grams of fat recommended in an average 2,000-calorie-a-day diet).

You can also figure the percent-

age of fat *calories* in a serving by multiplying the number of grams of fat by nine and dividing that by the total number of calories in the serving. Remember, the total number of fat calories in your daily diet should not exceed 30 percent. Thus, a 2,000-calorie-a-day diet should not contain more than 65 grams or 585 calories of fat.

### FROM FAT TO FIT

If you're eating too much fat, based on recommended averages, or if your doctor has advised you to cut back on fats, try replacing fat-laden foods with complex carbohydrates, such as whole-grain breads, pastas, potatoes, rice, cereals, low-fat dairy products, fruits and vegetables. However, always consult your pediatrician before restricting the diet of children. Children need high-energy foods for growth.

# CALCIUM

## *How Much Is Enough?*

**C**alcium is the most abundant mineral in the human body. Most of it is found in the bones, but it is also found in the soft tissue and the blood. In addition to being necessary for healthy bone development, calcium plays a role in many body processes, including muscle contraction, nerve transmission, blood clotting and activities at the cellular level.

### HOW THE BODY STORES CALCIUM

The bones act as a storage area for calcium. It is removed from the bones as needed to maintain a steady level of calcium circulating in the blood. The bones might be thought of as a calcium “bank,” where calcium is deposited and withdrawn as needed.

Researchers have found that the most effective time to make calcium “deposits” is during puberty and young adulthood. By age 35 the bones are beginning to lose calcium faster than it can be



replaced. Those who have had adequate calcium intake throughout their lives have a larger “account” to draw on. Inadequate calcium storage can lead to osteoporosis and fragile bones.

### SOURCES OF CALCIUM

The recommended intake of calcium is 800 to 1,000 milligrams a day, the amount of calcium in

approximately three cups of lowfat milk. Teenagers and pregnant and nursing women may need more calcium. Milk products are by far the largest natural source of calcium. However, other rich sources are canned fish with edible bones, spinach, broccoli, citrus fruits and dried peas and beans. Calcium supplements also work well for most people.

When choosing a calcium supplement, avoid those containing dolomite or bone meal; they may be contaminated with lead. Calcium carbonate and calcium phosphate supply the most calcium. It is not necessary to buy expensive fortified supplements. Ordinary antacids, such as Tums, supply 200 milligrams of calcium per tablet and have the advantage of dissolving quickly in the stomach. Take supplements with meals and drink plenty of fluids for good absorption. Calcium is certainly an essential nutrient, particularly in the early and later years and especially for older women. Try to get sufficient calcium every day.

# Water Is Essential

**M**ost people tend to overlook water when thinking about the different kinds of nutrients that make up a proper diet. However, even though we can go without food for many weeks, we cannot go without water for more than a few days. Water is an essential component of life because it is used continuously by every cell of the body.

## **Water's Many Roles**

One of the functions that water performs is to provide a medium for all of the body's fluids, including blood, the digestive juices, urine and perspiration. Water also helps balance the acids in the body and carries nutrients into all the body's cells. Water plays a funda-



mental role in the nervous system as well by participating in the transmittal of the body's electrical impulses. Water also helps the body process the indigestible portion of food called fiber, which has been shown to reduce the risk of colon cancer and cardiovascular disease.

## **The Body's "Balancing Act"**

One of the most important balancing tasks performed by the body is controlling the relationship between salt and water. The body needs salt and water at all times, but always in the correct proportions. However, the body has a limited ability to store water. Luckily, the body produces an automatic reaction, which we experience as thirst, if the water level gets too low. Thirst is the body's way of telling us to replenish the body's water supply. Some individuals, particularly the elderly, have a diminished sense of thirst and need to remember to take adequate fluids, whether they feel particularly thirsty or not.

## **Find *Your* Water Level**

A good rule of thumb is to drink about eight to 10 eight-ounce glasses of water or other liquids each day (not counting coffee, which acts as a diuretic, actually *lowering* the amount of water in the body). Fruit and vegetable juices are fine. It would be wise not to drink too much water just before retiring for the evening, especially if you suffer from insomnia and might have to get up during the night to urinate or, for a child, if bedwetting has been a problem. Make sure to increase your intake of water if you engage in exercise or other rigorous activities. Try to get your eight glasses of water a day to fully enjoy its many health benefits.



# A LITTLE SODIUM GOES A LONG WAY

Sodium is a mineral that is essential for good health, but most of us consume far more of it than we need. A little sodium goes a long way.

## **Where Sodium Is Found**

Most of the sodium we eat comes in the form of table salt. The chemical name for this is sodium chloride. Our bodies need only about 2,000 milligrams of sodium a day, the equivalent of one teaspoon of salt, but most of us ingest two to six times that amount!

Most foods are naturally low in salt, especially complex carbohydrates, such as fruits,

grains and vegetables, but the canned, frozen and packaged foods we have grown used to tend to be high in salt. Even some medicines, such as antacids, are high in sodium.

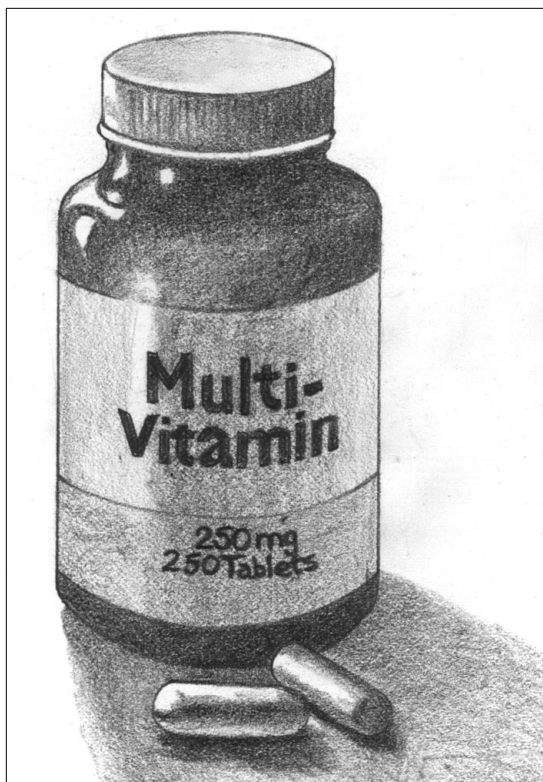
## **The Danger of Too Much Sodium**

Why cut back on sodium? Most physicians agree that a diet high in sodium contributes to high blood pressure, which, in turn, is a known risk factor for heart disease, America's number one cause of death. Many heart patients are advised to go on low-salt diets, and most of us could improve our general health as well by cutting back on salt, whether we have heart

disease or not. Too much salt in the diet may be a factor in causing high blood pressure in those who don't have it yet, and a high-salt diet has been shown to contribute to an increase of kidney stones.

## **Alternatives To Salt**

Try various salt substitutes, such as herbs, lemon or lime juice, salsa, chili peppers or commercial salt substitutes. You may even discover the subtle but distinctive flavors of foods without any salt at all, flavors you may have been missing because they had been hidden by salt. If you just can't cut out salt completely, and your physician hasn't recommended doing so, try cutting back on salt gradually, never salting food until you taste it first and then adding only a pinch if you think it really needs it.



# VITAMIN AND MINERAL SUPPLEMENTS

Most people are concerned about getting the right amount of vitamins, minerals and other nutrients in their diets. With careful planning, most nutrients can be provided in daily meals and snacks, rather than in pill form. However, vitamin pills may still be required in certain cases:

- People on low-calorie diets may not get all the vitamins they need because their meals are so restricted. For these people, vitamin pills provide an easy, efficient way to supplement the diet.
- Women who are pregnant or breast-feeding may require vitamin and mineral supplements. Pregnant women should pay special attention to iron and folic acid, which are especially difficult to get through diet alone.
- When people grow older, their metabolism slows down, they eat less and they absorb nutrients at a slower rate. Older people can help restore the proper intake of nutrients by taking vitamin and mineral supplements.
- Some medical conditions and drugs make it difficult for a person's body to absorb nutrients. For example, people who suffer from anemia lack enough iron in their blood and often require iron supplements. Alcohol may also cause vitamin deficiencies by damaging the liver, which is one of the body's vitamin storage centers.

## If You Decide to Take Vitamins

Try to rely on healthy foods as the major source of nutrients. However, if you decide to take a vitamin or mineral supplement, check the label for ones that say 100 percent of the RDA for each nutrient. This means they provide all of the U.S. Food and Drug Administration's Recommended Daily Allowance for the average person. Some vitamins are toxic if taken in excess, so make sure you take them in the proper amounts. An excess of one vitamin or mineral may also interfere with the absorption of another one.

If you suffer from a specific medical condition, have special dietary needs or want to find out if you should be taking vitamin or mineral supplements, consult your doctor or a registered dietitian. Most vitamin and mineral supplements are safe when taken as directed but may be a waste of money if you're getting all the nutrients your body needs from a balanced diet.



**M**ost of us associate caffeine with coffee, but caffeine is also found in tea, chocolate, many soft drinks and some over-the-counter medications. Nonprescription stimulants, such as NoDoz and Vivarin, contain about as much caffeine as two cups of coffee.

Caffeine's popularity comes from the fact that it stimulates mental alertness. Caffeine is also used to treat certain types of migraine headaches and to treat hyperactivity in some children.

## OVERDOING IT

However, too much caffeine has drawbacks. It can cause:

- insomnia,
- nervousness,
- anxiety,
- upset stomach,
- poor fine-muscle coordination,
- increased blood pressure,
- disturbances in heart rhythm.

Caffeine may also cause some symptoms of premenstrual syndrome, such as fatigue, anxiety, and tender,

# CAFFEINE MORE THAN A QUICK PICK-ME-UP



painful breasts.

A little caffeine, such as two six-ounce cups of coffee or 20 ounces of caffeinated soft drink a day, is considered safe for most adults. However, the U.S. Food and Drug Administration advises pregnant

women not to use caffeine because of the chance that it may cause birth defects.

## CUTTING BACK ON CAFFEINE

If you decide to cut back on caffeine or stop using it entirely, do so gradually. Sudden withdrawal from caffeine can cause symptoms such as headache, drowsiness or nausea.

Good methods of cutting back include:

- mixing decaffeinated coffee with regular coffee;
- substituting instant coffee, which contains less caffeine;
- substituting decaf versions of your favorite soft drinks;
- cutting coffee consumption by one cup a day each week.

Headaches, nervousness or insomnia can have many causes. If these symptoms persist after you've eliminated caffeine from your diet, see your physician. In most cases, gradually cutting back or cutting out caffeine yields good results. You're likely to feel healthier, fitter and more rested.

# Fake Fats

**A**re the newly developed fat replacers (or “fake fats”) a dieter’s dream come true, or are they just another food fad? The answer depends at least partly on how fats fit into one’s eating habits.

Nutritionists have long held that the single most important change most people can make in their eating habits is to cut back on fat. Researchers have worked hard to provide the public with substances that give food the rich, creamy flavor and texture of high-fat foods without the added calories.

## The Rest of the Story

Since fake fats have no nutritional value, they can help satisfy a craving for rich foods without the extra calories, but they may also establish a habit of eating rich foods whenever the urge strikes, even if such foods are not readily available with fake fats.

The other nonfat ingredients in a food with fake fats may still be fattening. Even though carbohydrate and protein foods have less than half the calories of real fat, they can be fattening if eaten to excess. So nutritionists recommend eating a variety of foods to get the nutrients we need and cutting down on fattening foods altogether. If the goal is weight loss or maintenance or cardiovascular health, low-calorie eating should be combined with regular exercise. Fake fats may fill the bill on occasion, but the healthy eater shouldn’t rely on them for a complete, well-rounded diet.

## What Fake Fats Are Available?

There are three basic kinds of fake fats:

- Carbohydrate-based fat replacers, such as cellulose, gums, dextrins and modified food starch, have long been used as thickeners and stabilizers for sauces, salad dressings, frozen desserts and baked goods. Like other carbohydrates, they provide four calories per gram as compared to the nine calories per gram of fat.
- Protein-based fat replacers have come on the market under such brand names as Simplesse. They’re specially processed egg and milk proteins and have the same calorie content, four per gram, as other protein foods. However, they may cause allergic reactions in those who are sensitive to milk or egg products.
- A third fat replacer is made from fats that have been chemically changed so that the body doesn’t absorb them. It contains no calories and is marketed under the name Olestra. Both carbohydrate-based and protein-based fat replacers are destroyed by heat, but Olestra can be heated.



# FAT-FREE FOODS

**B**y law, foods containing less than half a gram of fat per serving are considered “fat-free.” So when choosing foods advertised as fat-free, make sure that the standard serving size listed on a food label conforms to the amount *you* usually eat. Food amounts formerly listed as fat-free, such as a teaspoon of “fat-free” salad dressing, may now be shown to contain a significant percentage of fat calories when eaten in a typical amount.

## GET ON THE ‘FAT-FREE’ BANDWAGON

Most of the fat-free foods in the supermarket don’t come with labels. That’s because they’re found in the fresh produce department. Even fresh foods such as these often have their nutrition information posted nearby. Nearly

all fruits and vegetables, with the exception of avocados, are fat-free, or nearly so, at normal serving sizes. As for other fat-free foods, a half-cup serving of most legumes, including beans, peas and lentils, whether dried or fresh, is fat-free. Skim milk and any product made from skim milk, such as nonfat yogurt and skim milk cheese, are also fat-free.

Some tasty fat-free snacks include unbuttered popcorn, raw vegetables with herb-seasoned nonfat yogurt dip, an orange or a glass of fruit juice.

## LOW-FAT IS FINE

Of course, it’s not necessary to restrict one’s diet to only fat-free foods. The same law defining typical serving sizes and the meaning of “fat-free” defines “low in fat” as having no more than 3 grams of fat

per serving. Such foods can be eaten fairly often without exceeding dietary guidelines, so look for the word “low” on food labels.

Here are some other ways to reduce fat in the foods we eat:

- Season both cooked foods and salads with herbs, spices or lemon juice, rather than butter, sauces or lots of salt.
- Substitute mustard or low-fat yogurt for mayonnaise in sandwiches.
- Cook foods in seasoned water or vegetable broth rather than frying them.

You can probably think of some other ways to make fat-free or low-fat foods interesting. Use your imagination to suit your taste—and check food labels to make wise shopping decisions.

# Sugar Is Sweet by Any Name

Nutrition-conscious shoppers have become familiar with the many names of sugar. Food labels may list sugar in any of these forms:

- sucrose
- lactose (milk sugar)
- invert sugar
- fructose (fruit sugar)
- corn syrup
- honey
- dextrose
- maltose

What's more, sucrose, or common table sugar, is the main ingredient in:

- raw sugar.
- brown sugar.
- turbinado sugar.
- molasses.
- powdered sugar.

These sugars may be slightly different chemically or in texture, but they all add up to four “empty” calories per gram. Though many people believe that some sugars, such as honey, are better for them than others, the fact is that most people’s bodies use all sugars in exactly the same way.

## FOOD LABELS HAVE CHANGED

Foods that formerly listed two or more kinds of sugar on their labels—but not as the first or second ingredient—may still have been higher in sugar than they appeared. Now most food labels list the total grams of all forms of sugar in a serving under a section called “Nutrition Facts.” Multiplying this figure by four gives you the number of empty calories from sugar in each serving of that product.

Likewise, products that have used the terms “Lite,” “All Natural” or “No Sugar Added” may have actually been *high* in sugar. Food labeling laws now have strict



and consistent definitions for such terms. For instance, “lite” means a product has one-third or fewer calories (or half of a particular nutrient, such as fat or sodium) compared to the original product.

## NOW THAT YOU KNOW

If you're trying to cut back on sugar, do a little detective work at the supermarket and in your pantry. Check the labels of all foods you buy. Even nonsweet items, such as salad dressings, sauces, gravies, soups, breads, processed meat products and medicines may contain substantial amounts of sugar.

The best way to avoid sugar additives is to steer clear of processed foods in favor of fresh fruits, vegetables and home-cooked meals. Use a good cookbook to prepare meals from scratch. If you have special health problems, such as obesity or diabetes, consult your doctor or a registered dietitian for advice on choosing the best foods for you. Life can still be “sweet” without sugary meals and snacks.

# SUGAR SUBSTITUTES

More and more soft drinks, condiments, frozen meals, desserts and coffee sweeteners contain sugar substitutes, often called non-nutritive or artificial sweeteners. These additives "fool" the taste buds into thinking they're sugar, but they actually contribute virtually no calories. Three such sweeteners are currently approved for use: saccharin, aspartame (more commonly called Nutrasweet) and acesulfame-k (commonly known as Sunette). Many people wonder if these additives are safe.

## **The "Substitute" Story**

■ Saccharin has been in use as a sweetener for nearly a century. No evidence has linked the use of saccharin to health problems in humans. However, some laboratory studies have shown an increase in bladder tumors in rats fed large amounts of saccharin. Though saccharin is

probably safe at levels humans use, the U.S. Food and Drug Administration recommends limiting saccharin use as a table-top sweetener. A further disadvantage of saccharin is that some people who use it notice a bitter aftertaste.

■ Aspartame has been on the market since 1983 and has been widely tested. Since it is closely related to naturally occurring body chemicals, researchers consider it extremely safe. However, it can't be used in baked goods, as prolonged heat causes it to break down. Furthermore, it should not be used by people suffering from an extremely rare genetic disease called phenylketonuria, or PKU, usually identified at birth.

■ Like aspartame, acesulfame-k, sold under the name Sunette, has been extensively tested for safety. It remains stable even when heated and

has no known health risks. Acesulfame-k may give a slight aftertaste when used extensively. It may not yet be as well known as aspartame, though it's commonly used in combination with other artificial sweeteners and is available as a tabletop sugar-substitute called "Sweet One."

## **Sugar Substitutes and Diets**

Limiting sugar is only one part of building healthy eating habits. If you want to cut down on real sugar to lower calorie intake and lose weight, you would be wise to avoid high-fat foods, as well as to include regular exercise in your weight-loss plan. Always consult your child's pediatrician before restricting or substantially changing a child's diet. Children grow rapidly and need more calories than adults.





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# Curbing Your Sweet Tooth

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**F**ew of us can resist the temptations of sweet food. Sweets go hand in hand with parties, celebrations and rewards for good behavior. One way to curb a sweet tooth is to find nutritious alternatives to high-calorie sweets.

## Low-Sugar Alternatives

Here are some snacks that cater to the craving for sweets without adding too much sugar and fat:

- favorite fresh fruits kept handy in a fruit basket;
- a cup of lowfat yogurt flavored with two tablespoons of low-calorie strawberry jam, a dash of cinnamon and grated lemon rind;
- chunks of frozen fruit, such as bananas, cherries and berries;
- instant “ice cream”: blend one cup lowfat milk, two cups frozen fruit and two tablespoons sugar, if desired. Eat it immediately or freeze it in plastic cups;
- fruit juice or a combination of fruit juice and soda water on the rocks.

If you find yourself simply unable to resist a

traditional dessert, try limiting the serving size so as not to give yourself an excuse to binge later on.

## Non-Food Responses

Another way to respond to a sweet tooth is to reward it—but not with food. Everyone has a list of favorite “feel good” activities. These could include:

- listening to a favorite piece of music,
- calling a good friend for a chat,
- stretching out for 10 minutes in a hammock,
- getting a quick facial or other beauty treatment,
- renting a movie,
- or taking a walk or other pleasant exercise.

You can probably think of other activities that are perfect for you. Pick one of these activities the next time your sweet tooth starts to get out of control. To make your job easier, rid your house and desk at work of high-calorie sweets. Stay away from activities and places that tempt you to eat sweets—or fill up first on a healthy sugar-free or low-sugar snack.

# KICKING THE JUNK FOOD HABIT

**M**ost people are tempted by junk food because they believe it's an easy alternative to preparing meals from scratch. However, junk food is rarely a good eating option. It's usually very low in nutritional value and contains large amounts of calories, fat, sodium and/or sugar. The convenience of junk food is its own "reward." There is rarely any contribution to healthy eating.

## Healthy Food Can Be Tantalizing Too

The best way to kick the junk food habit is to develop a taste for better foods. Once a person starts to focus on eating healthy foods, junk food will automatically appear less attractive.

The following techniques can help train the body and taste buds to prefer a healthy diet:

- Eat nutritious meals at regular times during the day.
- Take the time to enjoy each meal thoroughly.
- When hunger strikes between meals, reach for a lowfat, low-salt snack, instead of junk food.
- Learn to prepare home-made snacks, such as frozen pops made from unsweetened fruit juice or soda prepared from a mixture of fruit juice and plain carbonated water.
- Avoid having candy or other sweets around the house. When candy is available, save it for special occasions.
- Order smaller pizzas and ask for vegetable toppings instead of high-fat meats.
- Avoid deep-fried foods. Go for steamed, poached, baked, broiled or microwaved foods instead.
- Opt for smaller portions. For instance, order the small hamburger instead of the "super double burger with cheese and bacon."

## Cutting Back on Junk Foods

If it seems too difficult to cut out junk food altogether, there are a number of easy ways to substantially reduce the intake of these low-nutrition foods:

The switch from junk food to healthy eating takes a little time, so be patient. Eventually, the taste buds become accustomed to healthy food and may even begin to dislike the junk food they formerly craved.





# Cooking With Less Fat and Oil

Even when we omit obvious sources of fat from our diets, such as butter, sour cream and rich sauces, we still may be unknowingly consuming more fat than is good for us.

An ounce of many cuts of beef, for instance, may contain a lot of fat and 100 calories, even if all visible fat has been trimmed away. Some rich bakery products may derive half their calories from fat. Most cheeses are high in fat, as are nut butters. Cream soups and other prepared foods can also conceal fats and oils used in their preparation.

## Choosing Lowfat Foods

Where does one begin to cut fat in the diet? People can start trimming fat calories by emphasizing foods that are *naturally* low in fat: fresh fruits and vegetables; whole grains and whole-grain products, such as breads and cereals; and legumes, such as peas, beans and lentils. When buying beef, choose lean cuts, which may average as little as 52 calories per ounce.

## How To Cook the Lowfat Way

Next, learn lowfat cooking techniques. Fish, for instance, can be poached in broth or wine for added flavor. Use vegetable oil sprays or nonstick pans and grill, broil or bake meats instead of frying them. Always remove skin from poultry and trim visible fat from meats before cooking. If leaner cuts of meat appear too tough, let them cook longer at a lower temperature, adding liquid to prevent drying out. Acidic liquids, such as lemon juice and cooking wine, also have a tenderizing effect on meat. Experiment with favorite recipes, substituting lowfat or nonfat dairy products, such as skim milk for whole milk or nonfat yogurt for sour cream.

A lowfat diet is good for your health, your heart, and your waistline—not to mention your lifeline!



# COOKING WITH LESS SALT

people say that they find highly-salted foods, such as some canned soups, unpleasant and virtually inedible once they have omitted salt from their diets.

Another important health consideration is that extra salt in the diet is not recommended for people with high blood pressure.

**T**o people who grew up on cooking that was high in salt, a low-salt diet may taste bland and uninteresting. Changing habits takes time, but as you begin to cook without salt you may come to realize two important things: Who needs salt when you have delicious and healthful alternatives? And foods actually have flavors of their own, a fact often obscured by the "sameness" of salt.

## Salt Can Hide Flavors

It's true! Natural flavorings, such as herbs, spices and lemon and lime juice, can add interest to food without salt, and most foods have unique, subtle and interesting flavors. Salt is a heavy-handed flavoring, and once we lose our taste for it we may come to naturally prefer the individual flavors that emerge. Many

## COOKING TIP

If you accidentally oversalt a soup, stew or other water-based dish, try this: Drop a thinly sliced raw potato into the food a few minutes before it's done cooking to absorb some of the excess salt. Finish cooking, stirring frequently, remove from heat and let stand covered a few minutes more. Remove and discard these potato slices and mix in about a half cup of hot water before serving your dish.

## Now You're Cooking!

A simple way to stop cooking with salt is to stop buying salt. Take the salt shaker off the table and omit salt from recipes and food preparation. Next, cut down on processed foods and add more fresh foods to your diet. Approximately 90 percent of all processed foods contain sodium, so look for whole potatoes instead of frozen hash browns, and fresh vegetables instead of canned. Use simple techniques like saving chicken broth from a chicken you cook at home rather than buying a canned, powdered or bouillon cube broth. You gain in flavor and health and may even save a dollar or two, since processed foods are inevitably more expensive than the basic foods from which they are made.

# Cutting the Fat Out



**T**he most important single step we could take to improve our overall health, well-being and longevity would be to cut back on the amount of fat in our diets. Our bodies require only about 150 to 200 calories of fat, or about 16 to 22 grams a day, the equivalent of one-half to two tablespoons of vegetable oil. This will keep our skins supple and transport fat-soluble vitamins.

A high-fat diet has been implicated in

heart disease, obesity, cancer and diabetes, all known killers. The typical American diet may run as high as 45 percent to 50 percent fat, or up to 1,000 calories of fat a day. However, most nutritionists recommend about 20 percent of daily calories come from fat, or even less for someone in a weight-loss program. For someone on an average 2,000-calorie-a-day diet, this translates into 400 calories, or about 44 grams of fat a day. We know it's right to cut back on fat, but how do we do it?

## What to Eat and Not Eat

Begin by shifting the emphasis of the diet to foods that are flavorful and naturally low in fat, especially complex carbohydrates, which include fresh fruits, vegetables, grains, cereals, dried peas and beans. In countries where people rely heavily on such plant foods and less on animal foods, heart disease, diabetes and osteoporosis are rare.

Next, omit obvious fats, such as those found in dressings, butter, rich sauces, nut butters, avocado and sour cream. Often, fat is added to food after it's cooked. Many people say that after a few months of low-fat eating, the typical American meal tastes unpleasantly rich and greasy.

## How to Prepare It

Learning to cook and prepare food without fat also contributes to health. Omit fried foods, such as doughnuts, french fries and fried chicken. Prepare foods, such as fish and skinless chicken, by baking, broiling, poaching, microwaving or roasting. Use herbs, cooking wine, lemon juice or salsa to enhance flavors. Substitute low-fat and nonfat dairy products for their whole-milk counterparts. Use nonstick pans, nonfat broth or "lite" oil sprays instead of butter, margarine or shortening. Learn to select low-fat foods when eating out as well. There are numerous tasty, low-fat alternatives to the unhealthy, greasy or rich fare available at the market or in restaurants.



# Great Grains

**W**ith nutritionists advising us to cut back on fats and eat more complex carbohydrates, more and more people are turning to grains, such as rice, oats, wheat and wild rice, for a substantial part of their diets.

However, unusual grains are now available in health food stores, specialty stores and even supermarkets, often in the aisle featuring imported foods. These newly available grains add variety to a meal and provide an alternative for those who are allergic to wheat or corn.

## A DELICIOUS ASSORTMENT

Here are some specialty grains to try:

- Amaranth can be used in dishes that call for rice or oats. It's a rich source of Vitamin A, calcium, phosphorus and potassium.
- Barley, long a staple of hearty soups, makes a great rice or brown rice substitute. Barley has a mildly nutty flavor that comes across well in soups, salads, pilafs or stuffings. A cup of cooked barley contains only 1 gram of fat.
- Everyone is familiar with buckwheat pancakes. Another buckwheat dish is called kasha, roasted whole buckwheat that can be cooked in water or broth as a hearty rice substitute.
- Bulgur is actually whole wheat that's boiled, dried and then ground coarsely. Because it's precooked, it can be prepared quickly for a hot breakfast or a seasoned side dish or stuffing at dinner.
- Couscous is a processed form of the wheat commonly used to make pasta. Like bulgur, couscous can be cooked quickly. Its mild flavor lends itself to many seasonings.
- Millet is found in multigrain cereals and breads. This tiny-grained, yellow cereal is rich in iron. Toasting it before cooking brings out its nutty flavor, making it a good side dish for poultry and meats.

## EASY AND INTERESTING MEALS

Unless instructions indicate otherwise, cook grains in water as you would brown rice. Most of the packages in which these grains come, as well as many specialty cookbooks, feature recipes using these great grains. You can probably come up with a few recipes of your own, adding such grains to muffins, home-baked breads, poultry stuffings and soups. Seasoned only with herbs and a little lemon juice, these unusual grains make interesting—and delicious—side dishes. Their uses are as limitless as your imagination.



# FRUIT Is GOOD FOOD

**F**ruit contradicts the myth that anything good is either illegal, immoral or fattening, and most people *like* fruit. Fruit is, in fact, an important part of a well-balanced diet. It provides fiber and some vitamins and minerals essential to good health. What's more, fruit just tastes good.

## Berries Instead of Bonbons

Fruit contains carbohydrates and a small amount of protein, but very little, if any, fat. Except for avocados, which have about 31 grams of fat per fruit, most fruits contain less than 1 gram of fat per serving. Even though fruits contain

fructose, sucrose and glucose, these sugars have less than half the calories of fat. Fruits also have no cholesterol and little or no sodium. Depending on the type, fruits contribute some essential nutrients:

- Peaches, apricots, cantaloupes, bananas, nectarines, mangoes and watermelon are sources of carotene, which the body converts to Vitamin A.
- Grapefruits and other citrus fruits and juices, melons, berries, papayas and kiwi fruit are sources of Vitamin C.
- Dried fruits, including raisins, dates, prunes and dried apricots, are good sources of iron and potassium. Bananas, oranges and other fruits also provide potassium.
- Many fruits provide folic acid and magnesium.
- Fruit adds fiber to your diet, which appears to play a role in lowering the risks of cardiovascular disease and some types of cancer.

## The Forms of Fruit

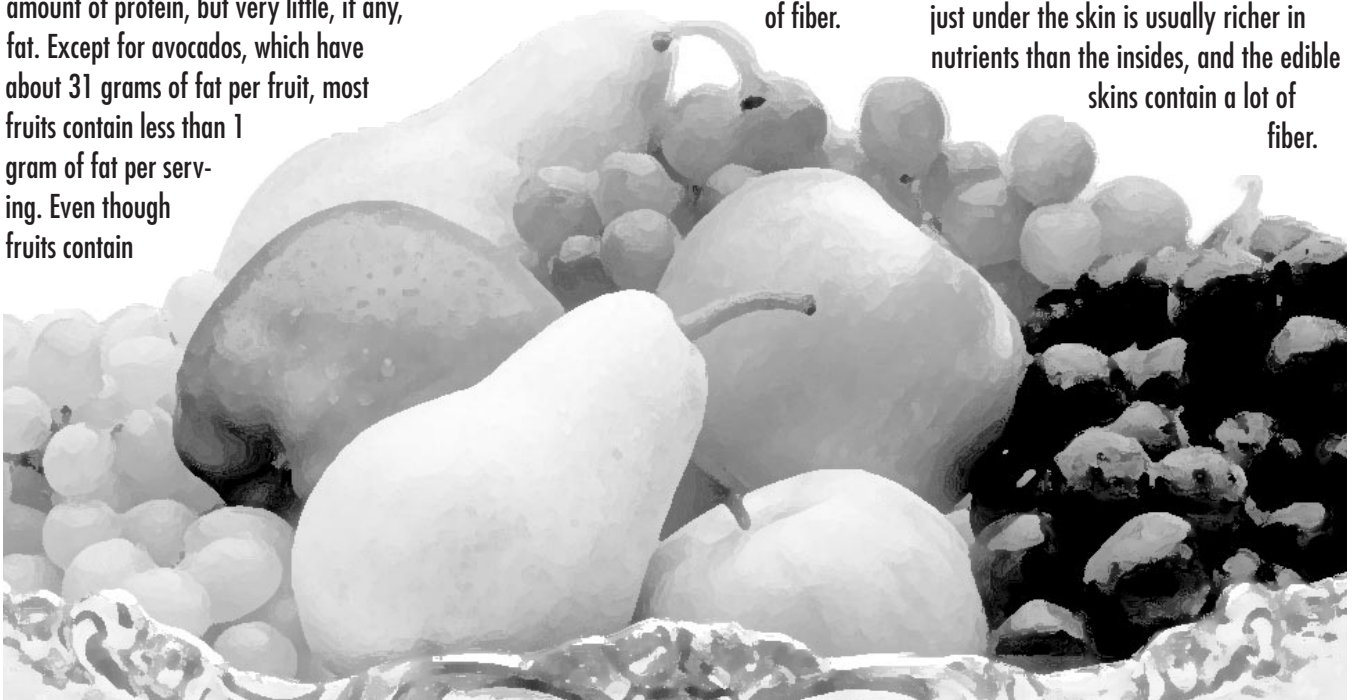
In general, the less processed a fruit is, the better it is for you. A whole apple with peel provides 2 grams of fiber.

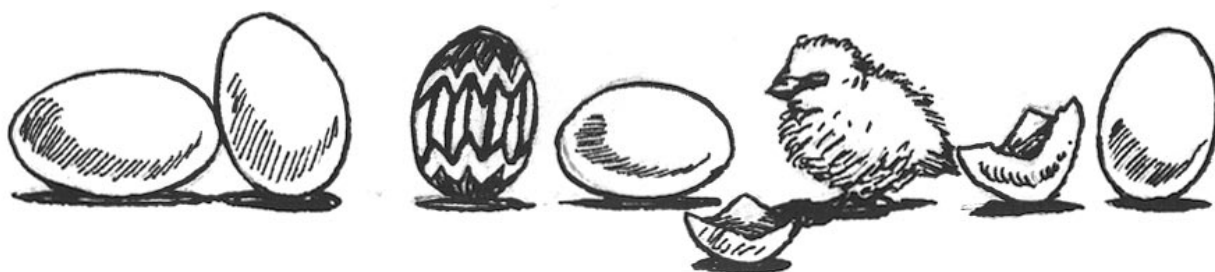
One-half cup of applesauce provides a little over half a gram of fiber. However, three-quarters of a cup of apple juice supplies only a quarter gram of fiber.

Freezing, canning or drying fruits can result in varying losses of Vitamin C and Vitamin A, while the addition of sweetened syrups to the canned and frozen forms adds extra calories. In order to keep Vitamin C and carotene from being destroyed when fruits are dried, the fruits are exposed to some form of sulfur. The resulting sulfite residue in the dried fruit may cause an allergic reaction in some people, so read labels carefully if you're sensitive to sulfites.

## The Preferred Snack

More people eat fruit during snack breaks than at any other time during the day, especially bananas, apples and grapes. Fruits are a smart alternative to fattening, salty or sugary snacks. When shopping, be sure to reject bruised fruit, since that may indicate some loss of nutrients. Opt for whole fruit, rather than slicing or dicing it, and eat the peels of apples, apricots and plums. The area just under the skin is usually richer in nutrients than the insides, and the edible skins contain a lot of fiber.





# EGG-CITING EGGS

**E**ggs are delicious, rich in protein and nutrients, and easy to prepare. However, because egg yolks are also rich in cholesterol, most nutritionists advise limiting egg yolks to three or four a week.

## SMART COOKING WITH EGGS

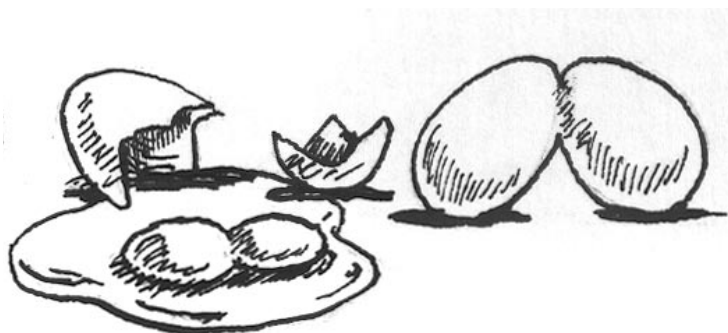
Egg lovers can get around the cholesterol problem and still enjoy eggs by substituting egg whites for some of the yolks. The following approaches work well:

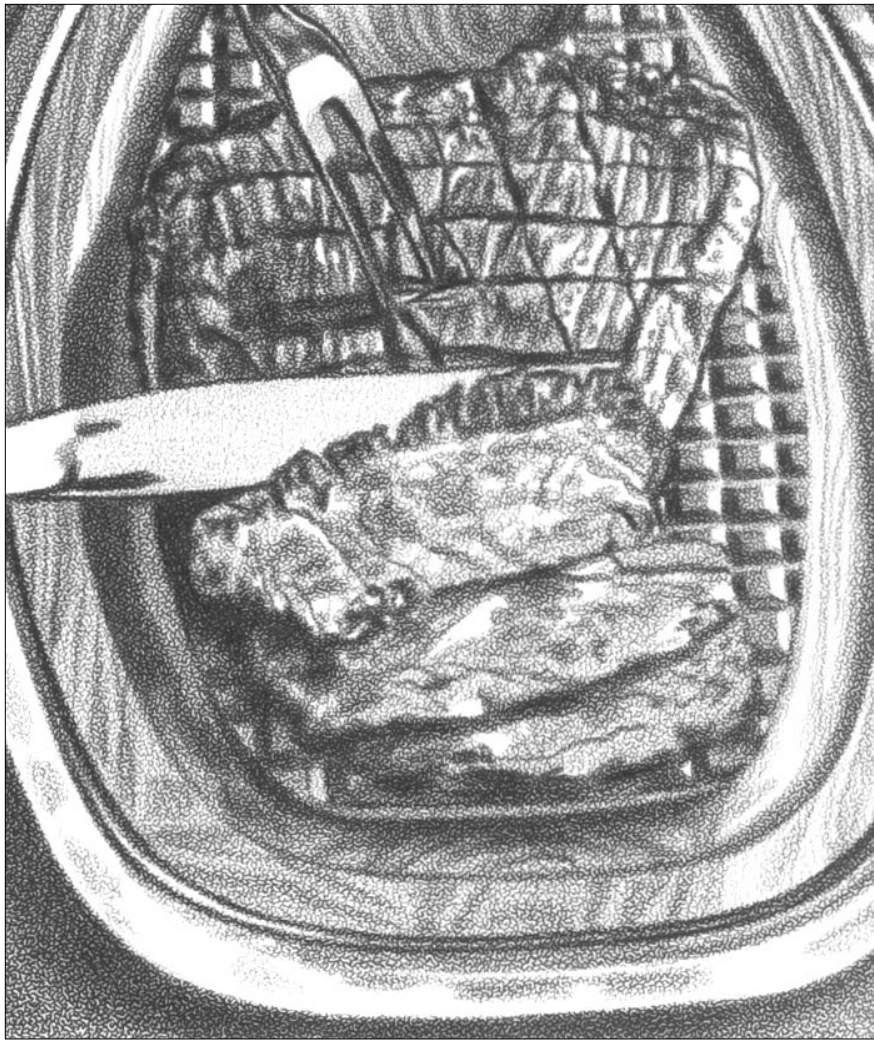
- Limit egg yolks to one per serving when making scrambled eggs or omelets and use additional whites to make servings larger.
- Substitute two egg whites and a teaspoon of vegetable oil for each whole egg in recipes for muffins, cookies and other baked goods and puddings.
- In egg-based recipes, such as quiches, substitute two egg whites for one whole egg for half the eggs in the recipe. Thus, if six eggs are called for, use three whole eggs and six egg whites instead.
- Use packaged egg substitutes, found at most markets in the dairy

section, for some or all of the eggs in a recipe. Egg substitutes are primarily egg whites with other ingredients that enhance the flavor and texture of the product.

## EGG SAFETY

To avoid food poisoning when handling eggs, never eat raw eggs. For instance, if a recipe calls for whipped egg whites, make sure they are cooked at some stage of preparation, even if only browned, such as a meringue in an oven. Always wash your hands and the outsides of the eggs before breaking the eggs and discard cracked eggs before anyone has a chance to use them. You don't have to give up eggs if you use them wisely and in moderation.





# When You Choose Beef

**I**t used to be that a well-marbled piece of beef was considered high-quality meat, but more and more consumers are asking for beef that is lower in fat and cholesterol.

The beef industry has responded in two ways. First, most butchers have reduced the amount of "trim" or fat around the outside of the meat from one-half inch to less than one-eighth inch.

Secondly, because the butcher doesn't get paid for this trimmed fat, the beef industry is under pressure to provide beef with less fat to begin with. So growers are experimenting with feeds that produce a leaner cut of beef.

## ***Grades, Cuts and Methods Of Preparation***

Most supermarket meat comes in three grades: prime,

choice and select. Consumers who want to eat beef that is lower in fat should ask for select beef, formerly called "good" beef.

In addition to choosing leaner *grades* of beef, consumers should choose *cuts* that are particularly lean, such as:

- eye of round,
- top round,
- round tip,
- tenderloin,
- sirloin,
- bottom round.

Good methods of preparing beef without added fat include broiling, roasting and simmering in liquid. Tough cuts can be tenderized by slow simmering, cooking in a pressure cooker, marinating in wine or lemon juice the night before to soften the fibers of the meat, or cutting such cuts in thin slices across the grain.

## ***Don't Be Afraid To Ask***

Currently, over 95 percent of beef sold is choice grade. So ask your butcher to stock more select grade beef. To further reduce saturated fat in your diet, look for and use recipes that call for smaller amounts of meat, such as in stir-fry dishes or casseroles. You'll save money and protect your family's health at the same time.

# There's Something About Spuds

**A**long with fruits, grains and other vegetables, potatoes are justly famous as a good source of some of nature's most valuable nutrients: complex carbohydrates. And they're nonfattening!

## Substantial Health Benefits

Because they have always been plentiful and relatively easy to grow, potatoes were formerly regarded as "low-class." Now, however, other "high-class" foods that also happen to be high in fats are being linked to heart disease and to some cancers, while foods high in protein, such as beef and eggs, are often fattening as well. Potatoes and their carbohydrate "cousins" are a healthy alternative. They may *taste* fattening but actually are not.

Carbohydrates contain only four calories per gram. Fat contains nine calories per gram, more than twice as many as carbohydrates.

Carbohydrates also raise your energy level, because they're converted into energy more efficiently than proteins and fats are. In addition, when potatoes are eaten with their skins they provide a substantial amount of dietary fiber. Fiber has been shown to reduce the risks of cardiovascular disease and some forms of cancer, particularly colon cancer.

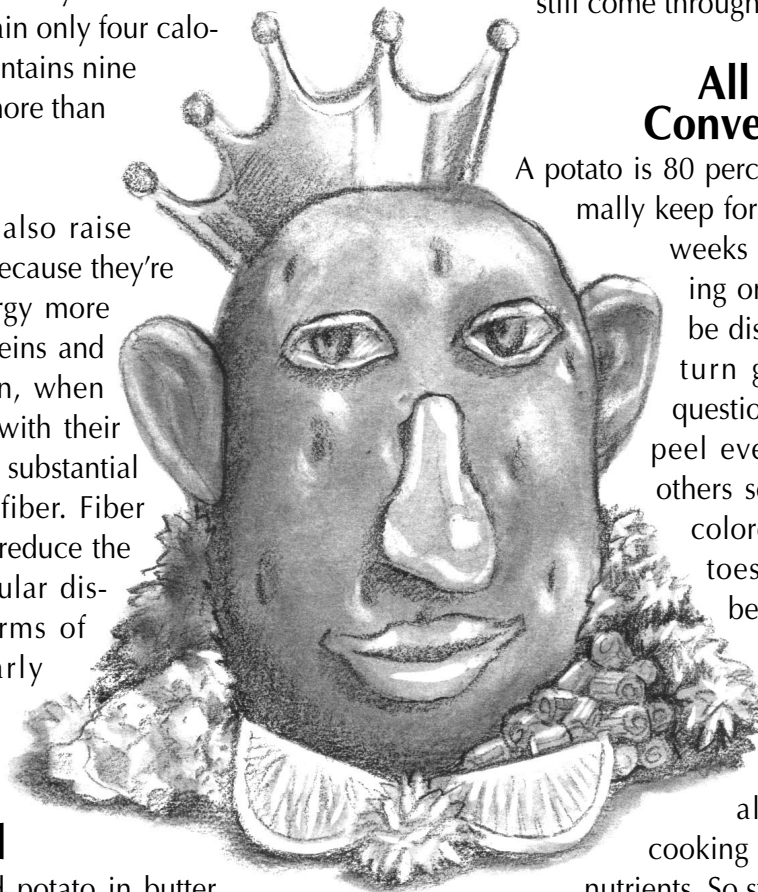
## The Well-Dressed Spud

Smothering a baked potato in butter and sour cream or frying potatoes in butter or oil, as for French fries, cancels out many of a potato's

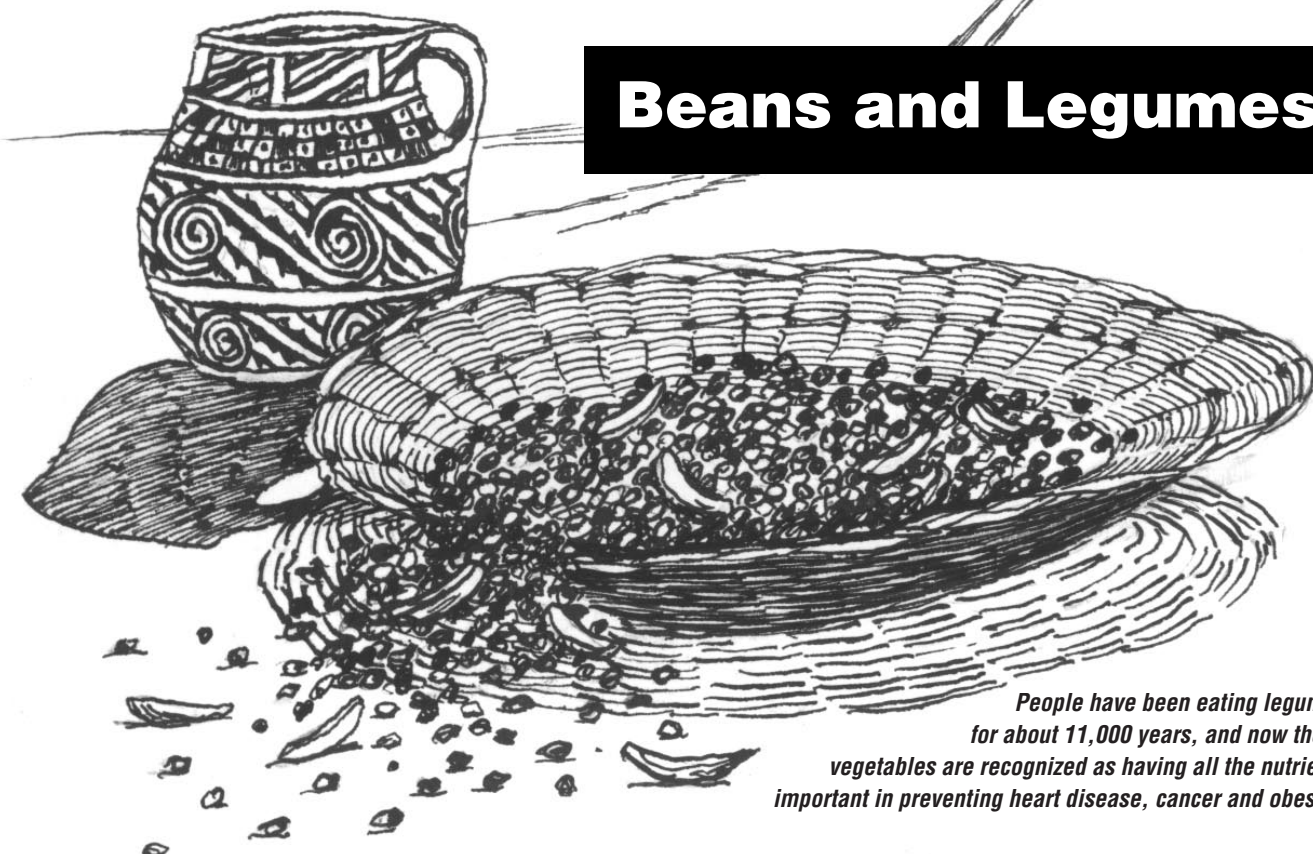
benefits. Most people would be surprised at how delicious a baked potato is simply sprinkled with lemon juice. There are also some tasty salt substitutes on the market. Other fat-free or lowfat toppings include fresh salsa; chicken broth with the fat skimmed off; Worcestershire sauce; fresh herbs, such as chopped dill; chili flakes; hot sauce; lowfat yogurt; unusual vinegars, such as those made from wine, rice or cider; capers; chopped green onion; minced garlic; shredded ginger root; toasted sesame seeds; or prepared horseradish. If you just can't give up fattening toppings, try to at least cut them down to a mere "taste" or, when dining out, order them "on the side" for dipping. Another tip is to try baking "fries" in the oven. Their great potato taste will still come through.

## All This and Convenience Too

A potato is 80 percent water and so will normally keep for a long time, up to several weeks in a refrigerator, depending on how fresh it is. It should be discarded if the skin starts to turn green. (Some scientists question the safety of the potato peel even in fresh potatoes, but others see no danger in normally colored peels as long as potatoes are thoroughly washed before cooking.) Microwave ovens can turn out a baked potato in a matter of minutes, instead of an hour in a conventional oven, and that form of cooking retains most of a potato's nutrients. So stock up on nature's powerhouse tuber: the potato. Its health benefits, versatility, convenience and taste make it a dietary winner.



# Beans and Legumes



*People have been eating legumes for about 11,000 years, and now these vegetables are recognized as having all the nutrients important in preventing heart disease, cancer and obesity.*

**L**egumes include beans, peas, lentils and garbanzo beans (also called chick-peas). People have been eating legumes for about 11,000 years, and these vegetables are the main source of protein for people in many developing countries.

Beans and other legumes have all the nutrients now recognized as important in preventing heart disease, cancer and obesity. They are high in complex carbohydrates, protein and fiber, and they are extremely low in fat. For people who may be allergic to a certain legume, such as peas, there are enough other kinds of legumes to reap these benefits.

## Anything but Boring

Do legumes sound boring? The following foods all include legumes:

- Italian pasta e fagioli;
- Middle Eastern falafel and hummus;

- Cuban black beans and rice;
- Mexican refried beans;
- Asian soybean products, including tofu, miso and tempeh;
- bean sprouts;
- split pea soup;
- lentil soup.

## Making Legumes Easier To Eat

Many people avoid beans and other legumes because of their reputation for producing gas. Studies show that people who eat beans frequently experience this problem less. The body seems to adapt. There are also new products on the market that reduce or eliminate excess intestinal gas when a few drops are placed on the first spoonful of "offending" food. Ask your pharmacist.

Beans and lentils can also be made more digestible by the following cooking methods:

- Soak them for eight hours before cooking.
- Change the soaking water several times.
- Boil them for 30 minutes, change the water again and continue cooking until tender.
- Add a pinch of baking soda during cooking.
- Add salt and acidic ingredients, such as tomatoes, after cooking.

## Great Legumes

Add beans gradually to your diet. To get the full nutritional benefit of legumes, gradually increase your consumption to three to four cups of beans, peas, garbanzos or lentils a week. Try a few tablespoons of garbanzo or kidney beans in a salad. Include beans, peas and lentils in soups or pasta dishes. Use nutritious, interesting recipes featuring legumes. Their benefits are simply too good to pass up.

# Healthy Snack Foods

Most people have been taught that snacking between meals can lead to weight gain or that it interferes with a proper diet. However, if a person snacks on the right foods at the right times, snacking can offer a healthy way to get extra energy during the day. Proper snacking can add vitamins, minerals and other nutrients to the diet too.

## *Snack Tips*

Here are some tips for developing good snacking habits:

- Choose snack foods that are low in fat, sugar and salt.
- Try to choose snacks that are high in fiber and complex carbohydrates, as well as vitamins and minerals.
- Get into the habit of keeping healthy snacks at work, so that there is always something nutritious on hand when break time comes around.

## *Timing Makes a Difference*

Different kinds of snacks are useful for different times of the day. If a regular meal is going to be eaten within an hour or so, have a small, low-calorie snack. The following lowfat, low-calorie snacks can be eaten any

time for a quick pick-me-up:

- fresh fruit,
- bread sticks,
- bagels without cream cheese or butter,
- unsalted pretzels,
- air-popped popcorn (again, hold the butter),
- vegetable juice,
- fresh vegetables dipped in low-calorie salad dressing.

If the next meal is hours away, try to choose a snack with staying power. The following snacks offer a tasty way to get energy that can last until mealtime:

- lowfat yogurt with a bagel,
- whole-grain crackers with lowfat cheese,
- two fig bars,
- skim milk with a muffin.

## *Energizers*

Studies have shown that healthy snacking makes people more alert and helps them think more clearly. When you find yourself getting tired during the day, avoid the candy or soft drink machine and reach for a healthy snack instead. The right snack at the right time can do wonders for your immediate needs and even contribute to your long-term health.

# Should You Feed Your Kids *Cartoon Foods*?

**W**hy do children prefer breakfast cereals shaped like dinosaurs? Because they're fun. And TV promotes the idea that eating should be fun and exciting. Unfortunately, many of these "cartoon foods" are high in fat, salt and sugar and low in nutritional value. They're also expensive.

## ***Nutrition Can Be Fun, Too***

Parents can satisfy their children's desires for novelty and still maintain good nutrition in the following ways:

- Mix half a bowl of high-sugar "cartoon cereal" with half a bowl of low-sugar cereal. Some delicious cereals have no added sugar at all.
- Be selective. Read food labels and choose those cereals (even ones your child wants) with the most fiber and nutrients and the

least fat and sugar. This may exclude some so-called "healthy" or "natural" granolas.

- Limit "cartoon foods" to once or twice a week.
- Add fresh fruit, such as berries, bananas or diced melon or pear, to breakfast cereals whenever possible or serve a glass of orange juice first.

## ***Going Beyond Cereals***

Parents can also make their own "fun foods" or, better yet, encourage children

to get involved:

- Use a cookie cutter and let children stamp out their own french toast or pancake shapes.
- At lunch or dinner make pasta dishes more fun by substituting zoo animal or teddy bear noodles for macaroni or spaghetti and adding a nutritious home-made sauce.
- Create vegetable art by cutting and arranging carrots and other raw vegetables in interesting shapes. Cookbooks are available with other fun food arrangements, such as broccoli "forests." Many kitchen gadgets can also help you out.

Check magazines for other ideas for making your children's meals more interesting. When kids ask for their favorite cartoon foods, don't "tune them out." Choose foods that are low in fat and sugar and that fit your budget. Then you can give them healthy, nutritious food and still "make meals more fun."



# CHECKING OUT "HEALTH FOODS"



**T**hese days, many people choose so-called "health foods," because these products may be less processed, or they may be grown or packaged without additives, preservatives, pesticides, hormones or irradiation. Many packaged food companies offer a variety of low-fat, low-salt foods and special grains, cereals, herbs and teas. However, just because a product is labeled as a health food doesn't automatically mean that it's healthy.

## "Natural" Doesn't Mean Healthy

Foods that are labeled "natural" might still contain substances that are harmful to a person's health. For example, buying sea salt instead of common table salt doesn't reduce the risk of high blood pressure or heart dis-

ease. Potato chips that are advertised as "natural" can still be very high in fat and salt. "Natural" cereals like granola can contain more fat and sugar than many packaged bran flake cereals. Likewise, a food company may exclude additives and preservatives from its definition of "natural." So people who may be allergic to an additive should still check "natural" food labels carefully.

## What About "Organic?"

Another typical health food claim is that food is "organic." This usually means that factory-produced pesticides or other artificial factors, such as growth hormones, were not used. However, it's not always easy for the average person to know the precise conditions under which the food was grown or how "organ-

ic" the food really is. Organic foods are often more expensive, too. In many cases, consumers may get better value for their money by purchasing ordinary fruits and vegetables and washing them thoroughly at home. As for growth hormones used for U.S.-grown beef, they've been tested and approved by U.S. government agencies and have no known side effects.

## The Bottom Line

Healthful eating is really a function of what kinds of foods are consumed rather than where they're purchased or how they're packaged and advertised. Many foods are healthy, whether they advertise that fact. Consumers who buy health foods should still read labels carefully and make wise food choices.

# VEGETARIANISM

**M**ore and more people are reducing their consumption of meat for reasons of health, economy, concern for the environment or concern for animals. Many have chosen to become full vegetarians, meaning they do not eat red meat, pork, poultry or fish. Others are concerned about whether they will get adequate nutrition on a vegetarian diet. Here are the facts about vegetarian nutrition.

## The Health Benefits

Studies have found that people with vegetarian or near vegetarian traditions, such as Seventh Day Adventists and the Chinese, have far lower rates of cancer, heart disease and obesity than those who consume a typical American diet, which emphasizes meat. Vegetarian

diets may protect against osteoporosis, the thinning of the bones that often occurs in the elderly, even though most vegetarian diets are lower in calcium. Vegetarian diets are usually low in fat and protein and high in the fiber and complex carbohydrates that nutritionists say are good for us.

## Types of Vegetarianism

The vast majority of vegetarians are lacto-ovo vegetarians. That is, they include dairy products and eggs in their diets. They are no more at risk for deficiencies than people who eat meat regularly, provided their diet has a variety of foods, especially complex carbohydrates.

Strict vegetarians, or vegans, avoid all food of animal origin, including eggs and dairy products. Some nutri-

tionists are concerned about

vegans meeting their dietary requirements for calcium, iron and vitamin B12 with such a diet, but if the diet is nutritionally balanced, vegans will have no difficulty maintaining good health.

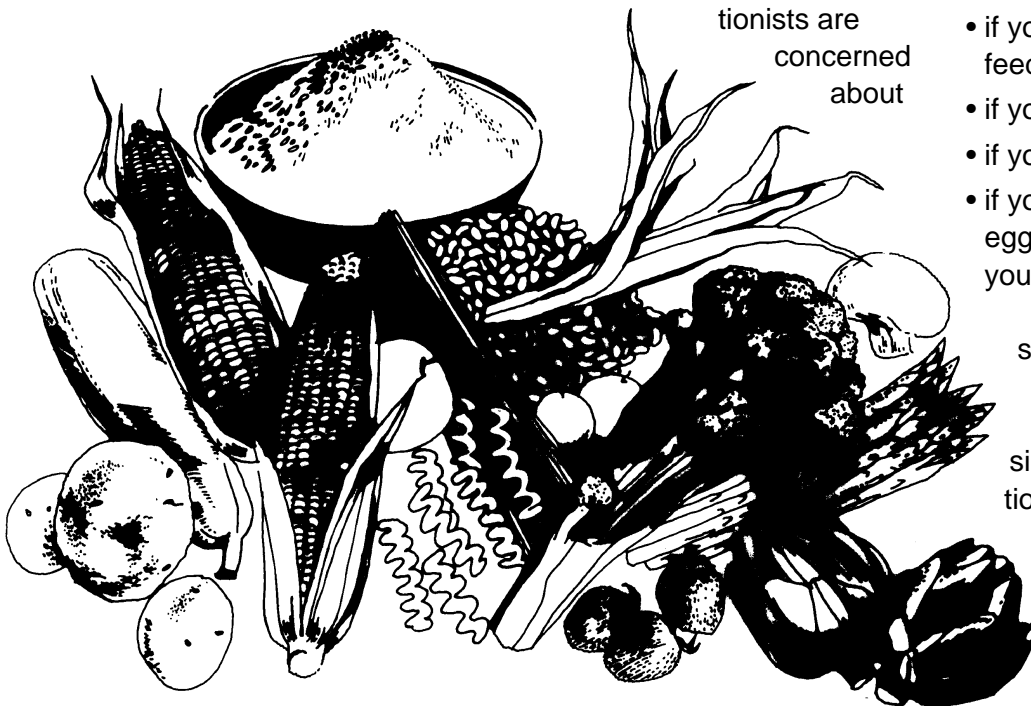
## Putting Vegetarianism to Work

Any new style of cooking takes practice. If you decide to become a vegetarian, get a vegetarian cookbook or swap recipes with vegetarian friends. Plan meals to include a variety of food groups, just as you always have. Avoid recipes that contain large amounts of oil, butter, margarine, cheese or other high-fat foods.

Before drastically changing your diet, get the advice of your physician or a registered dietitian in planning your meals, especially:

- if you are pregnant or breastfeeding,
- if you have young children,
- if you have a chronic illness,
- if you are planning to omit eggs and dairy products from your diet.

Vegetarianism is a personal choice in your eating habits that can have profound health effects. Consider all the factors—nutritional, maternal, economic and moral—in reaching your decision.





# Using a Food Diary

**A**n important step in any weight management program is understanding one's eating habits and what triggers excessive eating. The food diary is an important tool in dietary self-awareness.

## What to Put in a Food Diary

A typical food diary has an entry for every time something is eaten. It may include:

- the time of day.
- the time spent eating.
- the place where eating took place.
- any other activities done while eating.
- your mood at the time of eating.
- the food and amount eaten.
- the level of hunger at the time.

A food diary may also include an estimate of the number of calories or other nutritional information on the food eaten.

## Why Keep a Food Diary?

Food diaries serve two purposes. One is to shed light on what kinds of foods are being eaten, how much and the nutritional value of the food. The other purpose is to help the eater understand more

about his or her eating habits and the things that trigger eating in order to develop a strategy for changing those habits and avoiding the triggers. For instance, if a diary shows eating is triggered by boredom rather than hunger, this is a signal to develop other ways of relieving boredom. If extreme hunger is the trigger, smaller, more frequent meals and light, high-fiber snacks might be the answer.

## Interpreting Your Food Diary

Keep your food diary for at least two weeks before making any changes in your diet. Try to find any unhealthful eating patterns that you can change or redirect. If you have trouble interpreting your food diary entries or need help coming up with a healthier nutrition program, consider making an appointment with a registered dietitian. Look in the yellow pages of the phone book under "Dietitians," ask your doctor for a referral or call the American Dietetic Association (ADA). Get the ADA's toll-free number by dialing information at 800-555-1212.

Studies show that a combination of sensible eating habits and regular exercise is far more effective than so-called "diets" in taking weight off and keeping it off.

# Fitness & Nutrition KOPY KIT® on CD

## 1539\_IND Folder Contents

Use these individual files when you want to send pages as e-mail attachments.  
We suggest printing this Table of Contents for easy reference.

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